DOCUMENT RESUME

VT 001 711

ED 022 842

By-Hensel, James W.

AGRICULTURAL PROGRAMS AT THE POST HIGH SCHOOL LEVEL; SPECIAL REPORT PREPARED FOR THE PACIFIC REGIONAL SEMINAR IN AGRICULTURAL EDUCATION (OLYMPIA, MAY 15-19, 1967).

Ohio State Univ., Columbus. Center for Vocational and Technical Education.

Pub Date 19 May 67

Note-90p.

EDRS Price MF-$0.50 HC-$3.68

Descriptors-*AGRICULTURAL EDUCATION, AGRICULTURAL MACHINERY, AGRICULTURAL PRODUCTION, AGRICULTURAL SUPPLIES, AGRICULTURAL TECHNICIANS, AGRONOMY, ANIMAL SCIENCE, *DIRECTORIES, NATURAL RESOURCES, *POST SECONDARY EDUCATION, *PROGRAM DESCRIPTIONS, *TECHNICAL EDUCATION

A general overview of post-high school education in agriculture is presented to show the wide variety of programs and their curricular structure for use by school administrators. Representative agricultural programs in community colleges, junior colleges, vocational and technical schools, area schools, and in specialized technical training programs in colleges of agriculture were selected and described from catalogues and brochures sent to The Center for Vocational and Technical Education from 60 schools in 20 states. Programs were classified into areas of agricultural mechanics, agricultural business, plant and soil science, animal science, forestry and conservation, production agriculture, and other agriculture programs. Most institutions described a wide range of opportunities for high school graduates in all phases of agriculturally related occupations. The appendixes contain course descriptions by state and a 1966-67 directory of 1- and 2-year post-high school institutions offering programs of instruction in agriculture. (DM)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

c1

Agricultural Programs at the Post High School Level

ED022842

Special Report
Prepared for the
Pacific Regional Seminar in
Agricultural Education
(Olympia, ~~Washington~~

May 15-19, 1967)

VT001711

by

James W. Hensel
Specialist in Agricultural Education
The Center for Research and Leadership Development
in Vocational and Technical Education
980 Kinnear Road
Columbus, Ohio

TABLE OF CONTENTS

Page

I INTRODUCTION 1
  Purpose 1
  Procedure 1

II AGRICULTURAL MECHANICS 2
  TYPE I - Vocational Program 2
    Farm Equipment and Service 2
    Farm Equipment Sales and Service 4
  TYPE II - Combination of University Transfers and Vocational Program 5
    Agriculture Engineering Technician 5
  TYPE III - Agricultural Engineering Technology 6
    Agricultural Engineering Technology 6
    Agricultural Production Equipment Technology-Example Curriculum 7
    Agricultural Equipment Technology 8

III AGRICULTURAL BUSINESS 9
  Agribusiness 9
  Agriculture Business Management 11
  Business Administration 12
  Elevator and Farm Supply 13
  Agricultural Supply 14
  Agricultural Supplies Technology 15
  Agri-Business Technology 16
  Agricultural Technology - Business 17
  Feed and Fertilizer Marketing Technology 18

IV PLANT AND SOIL SCIENCE 19
  Plant and Soil Science 19
    Floriculture 19
    Fruit and Vegetable Crops 21
    Turf Management 22
  Plant Science 23
  Ornamental Horticulture 24
  Landscape and Nursery 25
  Soil Technician Training 26
  Citrus Fruit Production 27
  Soil Science 28
  Plant Science Technician 29
  Ornamental Horticulture and Retail Floristry 30
    Commercial Cut-Flower and Greenhouse Production 31
    Nursery and Garden Center Operation 32
  Agronomy 33
  Ornamental Horticulture - Floriculture Option 34

Page

V ANIMAL SCIENCE 35
Animal Science Technology 36
Animal Science 37
Animal Husbandry 38
Poultry and Livestock Technology 39

VI FORESTRY AND CONSERVATION 40
Forestry Technology 40
Forestry and Conservation 42
Soil Conservation Technology 43
Conservation Technology 44
Outdoor Recreation - Conservation Technology 45

VII PRODUCTION AGRICULTURE 46
Production Agriculture 46
Ranch Operation 47
Agriculture Production 48
Agriculture - Farm Management and Operation 49
Terminal Agriculture 50

VIII OTHER AGRICULTURE PROGRAMS 51
Food Processing Industry 51
Food Processing Technology 52
Food Processing Technology 53
Agricultural Chemicals Technology 54
Welding 56
Animal Hospital Technology 58
Wood Utilization 58

SUMMARY 59

APPENDIXES
Appendix A
Appendix B

I

INTRODUCTION

Purpose

The purpose of this study was to present a general overview of the post high school programs in agriculture in the United States. This work should not be construed as a complete listing or a catalog of all programs, as the purpose was only to present a picture of the various types of programs and their curricular structure. The objective was to show the wide variety of programs in agriculture at the post high school level which would be of value to school administrators.

Short-term programs such as the typical young and adult farmer classes, retraining courses in specific skill areas and three or four week workshops were not considered in this study. The primary target of this publication were the one and two year programs in post high school agricultural education offered in community colleges, junior colleges, vocational and technical schools, area schools, and in specialized technical training programs in colleges of agriculture.

Procedure

Representative agricultural programs were selected from catalogs and brochures sent to The Center for Vocational and Technical Education from one and two year post high school institutions. Usable material was received from 60 schools in 20 states. Liberal use has been made of statements which appeared in program brochures and college catalogs.

The programs included were selected to provide a general picture of the types of curricula offered in each of the major program areas. A wide variety of curricular offerings are now available across the nation and no attempt has been made to include material from each state. The curriculums were selected as being fairly representative of a specific type of program and no attempt was made to evaluate the quality of the curriculum nor was there a plan to recommend a specific structure or institution.

The main body of this report is comprised of descriptions of representative post high school programs in the following major areas.

A. Agricultural Mechanics
B. Agricultural Business
C. Plant and Soil Science
D. Animal Science
E. Forestry and Conservation
F. Production Agriculture
G. Other Agriculture Programs

II

AGRICULTURAL MECHANICS

Terminology as applied to agricultural mechanics programs was one of the major problems faced as the curriculums were analyzed. The two-year courses in agricultural mechanics have been called by a variety of names including: Agricultural Equipment and Power Machines; Agricultural Equpiment Repair; Agricultural Engineering Technology; Farm Mechanics; Farm Machine Technology, and a variety of additional titles.

Program content varied in many respects as each institution had developed the course to meet local specifications. To facilitate the purposes of this report, the agricultural mechanics programs were classified and presented according to three major types:

TYPE I	Vocational Programs
TYPE II	Combination of University Transfer and Vocational Programs
TYPE III	Agricultural Engineering Technology

TYPE I Vocational Program

Farm Equipment and Service

Lane Community College
Eugene, Oregon

A farm equipment service program was requested for Oregon by the farm implement industry due to shortage of trained personnel in this field. A state-wide advisory committee assisted in the development of the curriculum plan. The State Department of Education prepared the recommended course of study for this curriculum and Lane Community College was selected as the center to offer this program, due to the location in relation to farm activity in the state.

An applicant must be at least 18 years of age and capable of benefiting from instruction in this field. An applicant should have had some past contact with agriculture or farm equipment. Vocational agriculture in high school and farm work are among beneficial past experience.

The complete program can be finished in two years. The sequence of courses can be covered in six terms. The summer between the first and second year of the program will be scheduled for supervised work experience with a farm implement dealer or serviceman.

The program was established in the fall of 1966 and therefore, the course sequence listed here served only as a general guide to the program during the first year.

Farm Equipment Service

First year

First Term	Hours	Second Term	Hours
Farm Impl. I	5	Farm Impl. II	5
Farm Impl. I Lab	3	Farm Impl. II Lab	3
Math II	3	Practical Physics I	4
Machine Shop Orient.	3	Machine Tool Operation	3
Welding IA	2	Internal Engines I	2
	16	Internal Engines I Lab	1
			18

Third Term	Hours
Farm Impl. III	2
Farm Impl. III Lab	2
Appl. Fluid Mechanics	2
Power Trains	2
Power Trains Lab	2
Fuel Systems, Farm Equip.	4
Practical Physics III	4
	18

Second Year

Fourth Term	Hours	Fifth Term	Hours
Farm Equip. System	4	Farm Equip. Hydraulics I	3
Farm Equip. Engines	5	Farm Equip. Power Trains	3
Farm Equip. Engines Lab	3	Crawler Tractors	5
Communication Skills I	3	Crawler Tractors Lab	3
Hydraulic Heavy Equip.	3	Communication Skills II	3
	18		17

Sixth Term	Hours
Farm Equip. Service Mat.	3
Farm Equip. Painting	2
Farm Equip. Hydraulics II	3
Tractor, Major Overhaul	7
	15

Farm Equipment Sales and Service

College of Agriculture
Michigan State University

The Farm Equipment Sales and Service program provides training for persons entering farm equipment dealerships as salesmen, partsmen, and service technicians. The program is planned for 18 months including one year of on-campus study and six months of employment in a farm equipment dealership.

First Year

Fall Term	Credits
Seminar	1
Service Shop	3
Farm Machinery I	3
Machine Fundamentals	4
Tractor and Power Units	3
Business Management I	3
Effective Study and Reading	2
	19

Winter Term	Credits
Seminar	1
Farm Machinery II	3
Basic Electricity	3
Advanced Farm Power	4
Agricultural Economics	3
Salesmanship I	3
	17

Spring and Summer Terms	Credits
On-the-job training	10

Second Year

Fall Term	Credits
Seminar	1
Tractor Electrical Systems	4
Business Management II	3
Bookkeeping	3
Personnel Practices	3
Business Law	3
Writing and Speaking I	3
	20

Winter Term	Credits
Seminar	1
Salesmanship II	3
Drainage and Irrigation	3
Farm Produce Processing	3
Writing and Speaking II	3
Machinery Management	3
Hydraulics	4
	20

TYPE II Combination of University Transfer and Vocational Programs

Agriculture Engineering Technician

College of the Sequoias
Visalia, California

The courses are designed to prepare students for farming or for jobs requiring practical agricultural training. College of the Sequoias students may be classified into two major groups: those students who are planning to continue their education in four-year colleges or universities and those students who expect to enter some occupation either before or after graduation from junior college. Curriculums were designed to meet the needs of students in both groups. The suggested two-year sequence of courses leading to the Associate in Arts degree in the agriculture engineering technician program include:

First Year

First Semester	Units	Second Semester	Units
Speech	3	English	3
Political Science	3	History	3
Farm Machinery	3	Basic Farm Mechanics	2
Agricultural Welding	3	Farm Management	2
Electives	3	Electives	5
Physical Education	½	Physical Education	½
	15½		15½

Second Year

First Semester	Units	Second Semester	Units
Farm Power	3	Farm Surveying	2
Agricultural Project Construction	3	Agricultural Project Construction	3
Hygiene I	2	Farm Structures	3
Machine Shop	3	Machine Shop	3
Electives	5	Electives	4
Physical Education	½	Physical Education	½
	16½		15½

TYPE III Agricultural Engineering Technology

Agricultural Engineering Technology

State University of New York
Agricultural and Technical
Institute at Delhi

Agricultural engineering technicians assist professional engineers in the application of basic engineering fundamentals and agricultural knowledge for the development of equipment and facilities for agricultural production and processing. The curriculum emphasizes analytical mechanics--machine design,power, structures, principles of automated systems, metallurgy and industrial refrigeration.

First Year

First Term	Credits	Second Term	Credits
Farm Power	3	Welding and Metallurgy	3
Basic Graphics	3	English Composition I	3
College Algebra	3	Anal. Geom. & Calculus I	3
Physical Education	-	Physical Education II	1
Physics I	3	Physics II	3
American Government	3	Introductory Economics	3
	15		16

Third Term	Credits
Farm Machinery	3
Mechanics and Strength of Materials	3
Anal. Geom. & Calc.II	3
Health	1
Introductory Psychology	3
Surveying	4
	17

Second Year

Fourth Term	Credits	Fifth Term	Credits
Electric Power	3	Dynamics	6
Industrial Refrigeration	3	Descriptive Geometry	3
Mechanics and Strength of Materials	4	Structural Design of Buildings	3
English Composition II	3	Anal. Geom. & Calc. IV	3
Anal. Geom. & Calc. III	3		15
	16		

Sixth Term	Credits
Machine Design	6
Fluid Mechanics	3
English CompositionIII	3
Differential Equations	3
Elective	3
	18

Agricultural Producation Equipment Technology

Example Curriculum
W. J. Brooking and H. N. Hunsicker
Agricultural Education Magazine
Vol. 38, No. 12, June, 1966

	Hours Per Week			
First Semester	Class	Laboratory	Outside Study	Total
Communications Skills	3	0	6	9
Drawing-Sketching & Diagramming	1	2	2	5
Planting & Tillage Equipment	2	6	4	12
Welding	0	4	0	4
Accounting-Agr. Equipment Bus.	3	0	6	9
Applied Mathematics	4	0	8	12
Agri. Equip. Tech. Seminar	1	0	2	3
	14	12	28	54
Second Semester				
Technical Reporting	2	0	4	6
Lawn & Garden Equipment	2	4	4	10
Applied Physics	2	4	4	10
Farm Power I (Gas Engines)	2	4	4	10
Hydraulics I (Basic)	2	2	4	8
Agricultural Electricity	2	4	4	10
	12	18	24	54
Third Semester				
Personal Relationships in Bus.	3	0	6	9
Advanced Welding	1	4	2	7
Elements of Farm Mechanization	2	4	4	10
Transmissions & Final Drives	2	4	4	10
Harvesting Equipment	2	4	4	10
Gen. & Industrial Economics	3	0	6	9
	13	16	26	55
Fourth Semester				
Agr. Equip. Mktg. & Serv.	2	0	4	6
Hydraulics II (Farm & Light Ind.)	2	4	4	10
Salesmanship	2	2	4	8
Farm Power II (Diesels)	2	4	4	10
Power Unit Testing & Diag.	2	4	4	10
American Institutions	3	0	6	9
	13	14	26	53

A special committee[1] of agricultural engineers has suggested a program of study for technology programs related to agricultural engineering. The report recognized that specific courses need to be designed to fit individual institution requirements, but suggested that a basis design was needed as a guideline. The committee suggested the following:

Agricultural Equipment Technology

Two-Year Program

	Semester Credits
Technical area of specialty	36
Related and supporting studies	
Mathematics - preferably at least algebra and trigonometry	6
Applied physics	3
Communication skills - including English, speaking and graphic representation	9
Agriculture - plant science, animal science, soils	9
Business	6
Social sciences	3
Total	72

A well worn, but appropriate cliche, "The curriculum must be designed to meet the needs of the community," again applies to institutions offering post high school courses in agricultural mechanics. If the majority of the graduates plan to return to the farm, the curriculum will need to vary greatly from a program designed to provide industry with skilled mechanics. If the goal of the post high school program in agricultural mechanics is to supply technicians for a machinery company, then the company should have an active role in establishing the content of the curriculum. Since the post high school programs have been highly responsive to the occupational opportunities, we find great variety in the programs being established. The three types of programs in agricultural mechanics have been presented to give an overview of the wide range of possibilities.

---

[1] Report of A Special Committee of the Education and Research Division to the American Society of Agricultural Engineers on Programs in Applied Agricultural Engineering. Mimeo, 9 pages. June 15, 1966.

III

AGRICULTURAL BUSINESS

Agribusiness is a relatively new term dealing with the combined technologies of both agriculture and business. Agribusiness programs provide the students with the opportunity to obtain the skills, abilities, understandings and attitudes needed for occupations that handle grain and supply, livestock feeds, seeds, fertilizer, agricultural chemicals, small equipment, and services to farmers.

A wide variety of programs have been selected for this section to give the reader an indication as to the differences and similarities that exist in agribusiness programs across the nation.

Agribusiness

Northeastern Junior College
Sterling, Colorado

Agribusiness involves a combination of specialized courses in agriculture and business that train the student for specific employment in the areas of farm chemicals and animal nutrition industries.

Northeastern Junior College and regional agricultural industries jointly share the responsibility of training the student in the classroom and in actual industrial experience of on-the-job training. The learn-earn plan requires the student to spend alternate periods of six months in the classroom and six months working in industry applying the principles learned in the classroom to the practical application on the job.

First Year
(Common to both majors)

	Fall	Winter
General Chemistry	5	
Agricultural Mathematics	5	
Business Correspondence	3	
English	3	
Agri-Business Orientation	2	
Organic Chemistry		5
Mathematics of Business		3
Soil Science		6
Fundamentals of Speech		3
Freshman Livestock Judging		1
	18	18

Farm Chemicals Major

Second Year

Fall	Units	Winter	Units
General Botany	5	Crop Production	6
Introduction to Business	5	Soil Fertility	5
Biochemistry	5	Bookkeeping & Credit Management for Agribusiness	5
Agri-Business Salesmanship	3	Technical Report Writing	2
	18		18

Farm Chemicals Major

Third Year

Fall	Units	Winter	Units
Entomology	5	Fertilizer Technology	5
Agri-Business Management	5	Consumer Economics	3
Agriculture Sprays and Dusts	4	Public Relations in Agri-Business	3
Plant Pathology	4	Technical Report WritingII	2
	18	Electives	3
			16

Animal Science Major

Second Year

Fall	Units	Winter	Units
Biochemistry	5	General Dairy Husbandry	5
Introduction to Business	5	Bookkeeping & Credit Management for Agri-Business	5
General Animal Husbandry	5	Feeds and Feeding	5
Agri-Business Salesmanship	3	Technical Report Writing I	2
	18		17

Third Year

Fall	Units	Winter	Units
Production Cattle Feeding	5	Consumer Economics	3
Agri-Business Management	5	Public Relations in Agri-Business	3
General Poultry Husbandry	5	Crop Production	6
Electives	3	Technical Report WritingII	2
	18	Electives	3
			17

Agriculture Business Management

Arizona Western College
Yuma, Arizona

The agriculture business management program provides practical experience and a careful balance of agriculture, business, and general education courses so that the two-year graduate will have a long-run potential for growth in the agriculture business field.

Freshman Year

Fall Semester	Credits	Spring Semester	Credits
English	3	English	3
Salesmanship	2	General Entomology	4
Speech Fundamentals	3	Humanities Elective	3
Introduction to Business	3	Business Calculations	3
Principles of Horticulture	3	Principles of Agronomy	3
Typewriting: Personal Use	2	Physical Education	½
Physical Education	½		16½
	16½		

Sophomore Year

Fall Semester	Credits	Spring Semester	Credits
Animal Industry	4	Business Law	3
Principles of Economics	3	Citrus Fruit Production	3
Technical Chemistry	3	American Government	3
Accounting: Elementary	3	Accounting: Elementary	3
Principles of Marketing	3	Small Business Management	3
Physical Education	½	Physical Education	½
	16½		15½

Business Administration - Agricultural Marketing Major

Wausau Technical Institute
Wausau, Wisconsin

Business Administration, Agricultural Marketing students, in addition to business, marketing, sales and advertising classes, also receive advanced agricultural classes such as soils, agronomy, farm machinery and power, and farm materials and handling which are designed to give students an understanding of the complex products which he will come in contact with on the job.

The graduation requirement for an Associate Degree in Business Administration with a major in Agricultural Marketing is 64 credits.

First Year

First Semester	Credits
Soils and Soil Conservation	3
Principles of Marketing	3
Communications	3
Mathematics of Finance	3
Accounting	5

Second Semester	Credits
Agronomy	3
Merchandise Mathematics	3
Techniques of Layout and Lettering	2
Merchandise Display	3
Psychology of Human Relations	3
Communications II	3

Second Year

Third Semester	Credits
Farm Machinery and Power	4
Advertising Media	3
Effective Selling	3
Business Law	3
Economics	3

Fourth Semester	Credits
Farm Materials Handling	3
Senior Research Topic	2
Credit Procedures	3
American Institutions	3
Sales Management	3
Elective	3

Elevator and Farm Supply

College of Agriculture
Michigan State University

The training program in elevator and farm supply is of 18 months duration, including one year on the MSU campus and six months working in an elevator or farm supply firm. While on campus, students are enrolled in 24 courses which are directly related to the elevator and farm supply industry. Six months of on-the-job training is a required part of the program. Over 100 elevators and farm supply firms have cooperated to provide the work experience. Students are paid during this phase of their training. The course coordinator works with the student and the elevator managers in arranging and supervising on-the-job training.

First Year

Fall	Credits	Winter	Credits
Agricultural Biochemistry	4	Agricultural Economics	3
College Bookkeeping	3	Cereal, Bean, and Grain Grading	3
Elevator & Feed Industry	3	Writing and Speaking	3
Writing and Speaking	3	Principles of Livestock Feeding	5
Farm Crops Production	3	Soils and Fertilizers	3
Effective Study and Reading	2	Placement Seminar	1

Second Year

Fall	Credits	Winter	Credits
Agricultural Economics	3	County Elevator Management	3
Cereal, Bean, and Grain Grading	3	Financial and Credit Practices	3
Writing and Speaking	3	Salesmanship	3
Principles of Livestock Feeding	5	Seed and Grain Processing	3
Soils and Fertilizers	3	Insect Pests and Insecticides	3
Placement Seminar	1	Swine Feeding Management	4

Agricultural Supply

Joliet Junior College
Joliet, Illinois

The Agricultural Supply Curriculum is a two-year program designed to prepare students for employment in the field of agricultural supplies and services. Most of the courses have been developed specifically for the Agricultural Supply Curriculum and lead to the Associate Degree in Agricultural Supply Industries.

A student may request permission to participate in the agricultural business experience program by working for an agricultural industry during each of the four semesters. He would then carry a lighter classload each of the first three semesters and continue the academic classwork into the fourth semester.

First Year

First Semester	Hours
Communicative Skills	3
Introduction to Agricultural Supply Businesses	3
Retailing of Agricultural Supplies	3
Survey of Political, Social, and Economic Problems	4
Physical Education	1
Agricultural Economics	3
	17

Second Semester	Hours
Communicative Skills	3
Chemistry of Agriculture	3
Agricultural Computations	2
Principles of Feeding	3
Electives	6
Physical Education	1
	18

OPTIONAL Summer Program Between 1st and 2nd Years

	Hours
Agricultural Business Experience Program	6

Second Year

Third Semester	Hours
Agricultural Chemicals and Supplies	3
Agricultural Business	3
Agricultural Business	3
Crop Production	4
Salesmanship	3
Electives	4-6
Physical Education	1
	18-20

Fourth Semester	Hours
Agricultural Seminar	6
Agricultural Business Experience Program	12
	18

Agricultural Supplies Technology

Willmar Area Vocational-
Technical School
Willmar, Minnesota

Students receive intensive training through classroom and laboratory applications during six twelve-week quarters. Twenty-one agricultural courses are taught by agricultural instructors and fifteen business courses are taught by distributive and business education instructors. The courses are designed to give the student basic agricultural and business skills, abilities, and understandings necessary to the student's chosen occupation.

Students receive occupational training for the technical, managerial, sales, services, and clerical levels of employment. Students are also required to complete three months of supervised occupational experience. This training is received at an approved training center of the student's choosing between his freshman and sophomore years. Students are under the immediate supervision of the employer, are paid the normal wage of beginning employees, and are periodically visited by the school coordinator.

Courses	Credits
First Year	
Business Accounting	6
Introduction to Business	3
Office Machines	3
Merchandising	3
Salesmanship	3
Soil-Fertility	3
Soil Fertilizers	3
Beef, Sheep and Dairy	3
Swine and Poultry	3
Plant Science	3
Agricultural Business Management	3
Farm Law	3
Agricultural Mechanics	9
Summer Supervised Occupational Experience	6

Courses	Credits
Second Year	
Business Communications	6
Basic Statistics	3
Data Processing	3
Credit & Collections	3
Business Law	3
Human Relations	3
Display Techniques and Advertising	3
Agricultural Chemicals	3
Grain & Livestock Marketing	3
Principles of Agricultural Economics	3
Applied Animal Nutrition - Feeds	3
Agricultural Supplies Seminar	3
Applied Animal Nutrition - Feeding	3
Agricultural Prices and Policies	3
Grain Grading	3
Agricultural Supplies	3
Purchasing, Financing, and Merchandising	3

Agri-Business Technology

Clark County Technical Institute
Springfield, Ohio

Agri-Business Technology is a program of theoretical and practical instruction developed to meet the needs created by rapid technological changes. The distribution of courses in the program is approximately 50% technical, 25% basic science and 25% non-technical subjects. Students spend 25 clock hours per week in class for which they receive 15 quarter hours credit.

To be admitted to the Clark County Technical Institute the applicant must (1) be a high school graduate, (2) attain satisfactory scores on appropriate tests, (3) have a good mathematics background, and (4) be physically qualified to enter occupations in Agri-Business. The usual course sequence for the two-year program includes:

First Year

First Semester

Communications
Introduction to Agri-Business
Agri-Economics
Agricultural Mathematics
Farm Crops

Second Semester

Communications
Accounting
Feeds and Feeding
Economics
Soils

Second Year

Third Semester

Communications
Agri-Business Management
Livestock Management (Health)
Retail Merchandising
Farm Crops II

Fourth Semester

Credit and Finance
Salesmanship
Marketing Agricultural Products
Personnel Problems
Farm Management

Agricultural Technology - Business

Catawba Valley Technical Institute
Newton, North Carolina

The Agricultural Technology - Business curriculum is designed to help students acquire knowledge, skills, understanding, and abilities in the broad field of agricultural business. This training combines knowledge of agriculture with business practice to prepare the graduate for a cluster of many varied employment opportunities in agricultural business.

First Quarter	Credits
Business Mathematics	3
Communicative Skills: Reading Improvement	2
Animal Science	6
Introduction to Agricultural Economics	6
	17

Second Quarter	Credits
Accounting	6
Communicative Skills: English	3
Agricultural Marketing	6
Plant Science	6
	21

Third Quarter	Credits
Accounting	6
Farm Business Management	7
Communicative Skills: Technical Writing	3
Fertilizers and Lime	4
	20

Fourth Quarter	Credits
Agricultural Finance	6
Sales Development	4
Business Organization and Operation	3
Communicative Skills: Speech	2
Agriculture or Business: Elective	5
	20

Fifth Quarter	Credits
Farm Chemicals	6
Business Law	5
Farm Electrification	4
Written Sales Communications	4
	19

Sixth Quarter	Credits
Human Relations	2
Agricultural Program and Agencies	4
Business Management	3
Business Machines	2
Agricultural Business Practicum 190 MINIMUM HOURS	6
Agriculture or Business: Elective	5
	22

Feed and Fertilizer Marketing Technology

Eastern Iowa Community College
Muscatine, Iowa

The Feed and Fertilizer Marketing Technology program has been designed to provide the training to develop the skills, abilities and understandings needed by the student for entry into technical positions in the grain, feed, seed, fertilizer and agricultural chemical industry.

Each student will work as a trainee for four of the nine periods during a 21-month program. All periods are based upon 45 classroom days of instruction. To complete the program, each student will attend five nine-week periods or approximately 1,398 hours in the classroom. He will also acquire 1,392 hours of employment experience during the program.

Each student enrolled will complete the following course work during the five periods of classroom training.

Business and Distributive

Competency Area	Hours
1. Occupational Relations	90
2. Sales training	110
3. Business Practices and Management	235
4. Advertising	65
5. Accounting	175
6. Individual Study	Varies
Total Clock Hours of Business and Distributive	675

Technical Agriculture

Competency Area	Hours
1. Feeds	200
2. Seed	50
3. Grain	75
4. Fertilizer	200
5. Agricultural Chemicals	100
6. Modern Farm Practices	50
Total Clock Hours of Technical Agriculture	675

IV

PLANT AND SOIL SCIENCE

A wide variety of two-year courses have been categorized under the title Plant and Soil Science. The list includes course sequences for: Floriculture, Fruit and Vegetable Crops, Turf Management, Plant Science, Ornamental Horticulture, Landscape and Nursery, Soil Technician Training, Soil Science, Agronomy, Citrus Fruit Production, and Commercial Cut Flower and Greenhouse Production.

The plant science area seemingly has offered post high schools their greatest opportunity for vocational and technical training. It is a rapidly expanding area and offers outstanding opportunities for young men and women.

Plant and Soil Science

Stockbridge School of Agriculture
University of Massachusetts
Amherst, Massachusetts

The Stockbridge School of Agriculture is a part of the College of Agriculture at the University of Massachusetts. Graduates receive the Associate degree. The entering student is required to select one of eleven programs of study in agriculture.

High school graduates are eligible to apply and must have taken the Scholastic Aptitude Test given by the College Entrance Examination Board. Preference is given to students with good preparation in English, Mathematics, and Science, and a particular effort is made to select applicants who have demonstrated a strong motivation in their major field of interest.

Major programs of study in the Department of Plant and Soil Science are: Floriculture, Fruit and Vegetable Crops and Turf Management. Courses are taught by the University of Massachusetts staff. In addition to teaching by lecture and discussion, there is a strong emphasis on practical laboratory work. Freshmen majoring in Floriculture, Fruit and Vegetable Crops and Turf Management are assigned to summer placement jobs on or about April 1, which gives them approximately five months of field experience.

Suggested course sequences for the three study programs have been included in this publication.

Floriculture

First Year

First Semester	Credits
(Fifteen Weeks Resident Instruction)	
Principles of Economics	3
Tree and Shrub Identification	3
Greenhouse Management	4
Introductory Botany	3
Soil Management	3
Speech	2
Physical Education	-

Second Semester	Credits
(Eight Weeks Resident Instruction followed by Five Months Placement Training)	
Insects and Related Pests	2
Landscape Maintenance	1
Plant Science	2
Greenhouse Construction and Heating	2
Annual Plants	2
Foliage Plants	1
Plant Nutrients	2
Physical Education	-

Second Year

First Semester	Credits
(Fifteen Weeks Resident Instruction)	
Business English	2
English Composition	3
Commercial Floriculture	3
Floral Design	3
Plant Propagation	3
Plant Pathology	3
*Electives (Elect 1)	3
Accounting Principles	4
Entomology	3
College Algebra	3

Second Semester	Credits
(Fifteen Weeks Resident Instruction)	
Business Management	3
Utilities and Food Facilities	3
Herbaceous Perennial and Annual Plants	3
Floriculture Literature and Problems	2
*Electives (Elect 2)	
Accounting Principles	4
Marketing Management and Salesmanship	3
Horticultural Marketing	3
Floral Design	3
Commercial Floriculture	3

*Courses other than those listed may be elected with permission of the department advisor.

Fruit and Vegetable Crops

First Year

First Semester	Credits	Second Semester	Credits
Principles of Economics	3	Insects and Related Pests	2
Business English	2	Plant Science	2
Plant Science	3	Orchard Pruning	2
Deciduous Orchards	3	Greenhouse Vegetables	2
Commercial Vegetable Production	3	Plant Nutrients	2
Soil Management	3	Plant Diseases	2
Physical Education	-	Physical Education	-
		Plus Five Months in Placement Training	

Second Year

First Semester	Credits	Second Semester	Credits
Refrigeration, Heating and Air Conditioning	3	Agricultural Business Management	3
Horticultural Insects	3	Power Units	3
Mathematics	2	Horticultural Marketing	3
Small Fruits	3	Fruit Pest Control	3
Systematic	3	Commercial Vegetable Culture	3
Speech	2	Orchard Management	4

Turf Management

First Year

First Semester (Fifteen Weeks Resident Instruction)

First Semester	Credits
Business English	2
English Compostion	3
Tree and Shrub Identification	3
Soil Management	3
Basic Factors and Uses of Turf Areas	3
Speech	2
Physical Education	-

Second Semester (Eight Weeks Resident Instruction followed by Five Months Placement Training)

Second Semester	Credits
Elements of Bookkeeping	3
Turf Insects	1
Construction and Maintenance of Turf Areas	2
Plant Pathology	2
Recreation	2
Physical Education	-

Second Year

First Semester (Fifteen Weeks Resident Instruction)

First Semester	Credits
Power Units	3
Drainage, Irrigation and Soil Conservation	3
Arboriculture and Park Management	2
Report Writing	2
Topographical Mapping	3
Turf Maintenance	3

Second Semester (Fifteen Weeks Resident Instruction)

Second Semester	Credits
Business Law	3
Agricultural Machinery	3
Arboriculture and Park Management	2
Grading and Construction	3
Hebaceous Perennial and Annual Plants	3
Practical Turf Problems	3
*Electives (Marketing Management and Salesmanship)	3
College Algebra	3

*Elective with permission of department advisor

Plant Science

Agricultural and Technical College
Delhi, New York

Plant Science is a curriculum in the Agricultural Division of the College designed to better prepare those students who desire specialized training in plant and turf management.

The training program provides broad preparation in the basic sciences including Chemistry, Botany, Microbiology, Plant Physiology, and Genetics. Technical courses dealing with plants and soil include General Horticulture, Forestry, Woody Plant Materials, Soil Technology, Soil Conservation, Turf Management, Landscaping, Plant Protection, Weed Control and Field Crops. The two-year college program in Plant Science will qualify the student for the State University A.A.S. Degree.

First Year

First Term	Credits	Second Term	Credits
Livestock Production	3	Farm Forestry	3
Dairy Food Science	3	General Horticulture	3
Division Orientation	0	Plant Physiology	3
College Mathematics	3	English I	3
Physical Education	1	Physical Education	1
General Chemistry	4	Microbiology	4
American Government	3		17
	17		

Third Term	Credits
Farm Machinery	3
Woody Plant Materials	5
Health	1
Botany	3
Introductory Psychology	3
	15

Second Year

Fourth Term	Credits	Fifth Term	Credits
Farm Power	3	Weed Control	3
Soil Technology	5	Plant Protection	5
Landscaping	5	Commercial Fertilizers	3
English II	3	Business Organization	3
	16	Introductory Economics	3
			17

Sixth Term	Credits
Field Crops	4
Turf Management	4
Irrigation	3
Agricultural Sales	3
English III	3
	17

Ornamental Horticulture

State University of New York
Agricultural and Technical
College
at Farmingdale

The Department of Ornamental Horticulture offers courses for those who would engage in business or obtain employment in the field of ornamental horticulture. The program is based upon analysis of the job requirements of technicians in floriculture, landscape, nursery, turf, and related horticultural enterprises.

During the first semester, the courses in ornamental horticulture are basic and preparatory for the specialization which follows and are the same for all students. Integrated with the subject matter courses are laboratory and field experiences which provide students the opportunity to apply principles to specific problems and promote independent thinking. Specialization continues in the second year where further opportunity is afforded for improving competence and judgment.

Many graduates are stimulated to continue their education by transferring to four-year colleges or universities with one or two years of transfer credit.

ORNAMENTAL HORTICULTURE
(First Semester: the same for all Options)

First Semester	Hours per week Class	Hours per week Lab	Credit Hours
Chemistry	2	2	3
English Composition	3	0	3
Physical Education	0	2	½
Mathematics	3	0	3
Horticulture I	2	2	3
Horticulture Theory	1	3	2
Botany	2	2	3
	13	11	17½

At the beginning of the second semester each student selects one of the following major fields: Floriculture, Landscape Development, Nursery Management, or Turf Management.

Floriculture majors learn the techniques of plant growth and sales. They may pursue careers as floral designers, growers, salesmen, or garden managers.

Landscape students study design and plant care as a foundation for positions as arborists, superintendents of grounds, and landscape designers.

Nursery majors learn to propagate and grow the numerous and varied species of woody plants in preparation for a career as nursery manager, plant propagator, horticultural sales representative, and garden center manager.

Turf management students study turf maintenance as a business, turfgrass problems, horticultural and turf equipment, landscape plans, landscape construction and topographical mapping. This major prepares students for positions as golf course construction and maintenance foreman, turf farm management, cenetery, park and grounds supervisors.

Landscape and Nursery

College of Agriculture
Michigan State University

The Landscape and Nursery program is of 24 months duration, including two six-month periods on the MSU campus which alternate with two six-month training periods in a landscape or nursery firm.

First Year

Fall Term	Credits	Winter Term	Credits
Maintenance of Garden and Grounds	4	Plant Propagation	3
Ornamental Shrubs	3	Ornamental Evergreens	3
Basic Plant Science	3	Basic Soil Science	3
Practical Writing and Speaking	3	Insect Pests and Insecticides	3
Agricultural Biochemistry	4	Nursery Seminar	1
Effective Study and Reading	2	Nursery Management	2
		Landscape Drafting	2
		Landscape Equipment	3

Spring and Summer Terms	Credits
On-Job Training	10

Second Year

Fall Term	Credits	Winter Term	Credits
Lawn and Turf Management	2	Plant Diseases	3
Maintenance of Trees and Shrubs	2	Ornamental Plant Ecology	3
Nursery Practice	3	Nursery Seminar	1
Shade and Lawn Trees	2	Writing and Speaking	3
Business Law	3	Landscape Planning	2
Landscape Construction Problems	3	Salesmanship	3
Bookkeeping	3	Psychology	4
Special Problems	3	Special Problems	1 - 3

Spring and Summer Terms	Credits
On-Job Training	10

Soil Technician Training

College of Agriculture
Michigan State University

The Soil Technician Training program was developed by the joint efforts of the Soil Science Department, representatives of the fertilizer industry, and the Short Course Department. The program is 18 months in length, including one year on the MSU campus and six months of work experience in the fertilizer industry. The coordinator of this program is a staff member in the Soil Science Department, teaches the Soils courses in the program, and serves as the student's advisor.

First Year

Fall Term	Credits	Winter Term	Credits
Agricultural Biochemistry	4	Agriculture Economics	3
Basic Plant Science	3	Basic Soil Science	3
Writing and Speaking	3	Effective Study and Reading	2
Retail Merchandising	3	Practical Mathematics	3
Soil Laboratory Procedures	3	Writing and Speaking	3
		Soil Analysis	3

Spring and Summer

On-the-job Training

Second Year

Fall Term	Credits	Winter Term	Credits
Bookkeeping	3	Applied Entomology	3
Business Law	3	Business Management	3
Farm Crops Production	3	Financial and Credit Practices	3
Psychology	4	Salesmanship	3
Soil Classification and Mapping	4	Soil Management	4

Spring and Summer

On-the-job Training

Citrus Fruit Production

Arizona Western College
Yuma, Arizona

The Citrus Fruit Production two-year program is the only program of its kind among Arizona's junior colleges. The citrus industry is one of the fastest growing agricultural businesses in Arizona and California. There are good employment opportunities waiting for those people trained in the scientific aspects of citrus culture, nursery production, pest control and disease control, soil and in the operation of modern agricurtural machinery.

The program is carefully balanced between classroom study and practical experience. Field laboratory, general education, and business courses are included to enable the student to develop his potential for direct employment or for more intensive study at a university.

Freshman Year

Fall Semester	Credits	Spring Semester	Credits
English	3	English	3
Citrus Fruit Production	3	Citrus Fruit Production	3
Principles of Horticulture	3	General Entomology	4
Farm Tractors	2	Agricultural Mechanics	2
Business Calculations	3	Humanities Electives	3
Physical Education	½	Physical Education	½
	14½		15½

Sophomore Year

Fall Semester	Credits	Spring Semester	Credits
Plant Propagation	3	Pest Control	3
Man and the Biological World	4	Citrus Diseases	3
Soils	4	Fertilizers	3
Speech Fundamentals	3	Botany	4
Accounting: Elementary	3	Political and Economic Institutions	3
Physical Education	½	Physical Education	½
	17½		16½

Soil Science

Agricultural and
Technical College
Morrisville, New York

First Year

First Semester	Credits
Language and Composition	3
Chemistry	4
Farm Mechanics	3
Soil and Water Conservation	3
Microbiology	3
	16

Second Semester	Credits
Language and Composition	3
Chemistry	4
Mathematics	3
Introductory Soils	3
Botany	3
	16

Second Year

First Semester	Credits
Introduction to the Soil Sciences	3
Physical Education	1
Farm Management	3
Soil Fertility and Fertilizers	3
Entomology	3
Elective	3
	16

Second Semester	Credits
Problems in American Government	3
Physical Education	1
Agricultural Economics	3
Principles of Farm Management	2
Marketing	3
Elective	4
	16

Plant Science Technician

College of the Sequoias
Visalia, California

First Year

First Semester	Units	Second Semester	Units
General Chemistry	3	General Chemistry	3
Citrus Fruit	4	Farm Accounting	3
Economic Entomology	3	History	3
Agricultural Mathematics	2	Speech	3
English	3	Fertilizers	3
Physical Education	½	Physical Education	½
	15½		15½

Second Year

First Semester	Units	Second Semester	Units
Soils	3	Political Science	3
Farm Management	4	Hygiene	2
Basic Farm Mechanics	2	Weeds	3
Irrigation	3	Farm Machinery	3
Electives	3	Electives	4
Physical Education	½	Physical Education	½
	15½		15½

Ornamental Horticulture and Retail Floristry

City College of San Francisco
San Francisco, California

The Department of Ornamental Horticulture and Retail Floristry offers students two years of preparation for employment in producing, selling, and caring for plants and flowers used to beautify homes, stores, gardens, parks, highways, and industrial property. Training is offered in four fields: commercial cut-flower and greenhouse production, landscape gardening, nursery and garden-center operation (students may major in any two of these fields concurrently), and retail floristry. The Program in Ornamental Horticulture and Retail Floristry comprises the curriculums in these fields.

Enrollment is open to all interested students and instruction is tuition free as City College is a part of the San Francisco system of public schools.

Students in the Program may obtain field training in the ornamental horticultural or retail floral industry by enrolling in the appropriate work-experience course. To receive credit, students must work at least 15 hours weekly in an approved position. The College helps students in the course find salaried employment. Placement depends upon students' abilities and records, employers' requirements, and economic conditions. Students are supervised by both employers and instructors.

Students completing a curriculum suggested by the Department to enable them to meet special needs also receive the Certificate if they satisfy Department requirements. The Department of Ornamental Horticulture and Retail Floristry recommends for employment all graduates who receive the Certificate and makes a special effort to find positions for them.

Students who complete the Curriculums in Commercial Cut-Flower and Greenhouse Production, Landscape Gardening, or Nursery and Garden-Center Operation satisfactorily may transfer to California State Polytechnic College as juniors and work toward the degree of Bachelor of Science in ornamental horticulture. Course sequences have been listed for two of the programs offered within the Department of Ornamental Horticulutre and Retail Floristry.

Commercial Cut-Flower and Greenhouse Production

Students who complete the Curriculum in Nursery and Garden-Center Operation satisfactorily are qualified for employment in the wholesale and retail nursery businesses as growers, propagators, salespeople, and seedsmen. Graduates of this two-year course of study may also take civil service examinations for positions as spray-control operators and supervisors, week-seed analysts, farm and garden supervisors, horticultural inspectors, and plant propagators.

The course of study includes instruction in nursery operation, principles of ornamental horticulture, plant identification, the use of horticultural machines, and business practices in the ornamental horticultural industry.

First Semester	Units
Business Math	2
Communications	3
Introduction to Ornamental Horticulture	3
Plant Identification	3
Personal Health	2
Electives	3
Physical Education	½

Second Semester	Units
Elective	3
Introduction to Ornamental Horticulture	3
Plant Identification	3
Horticultural Mechanics	3
Physical Education	½
Electives	3

Third Semester	Units
Plant Identification	3
Cut-Flower and Greenhouse Production	3
Physical Education	½
U. S. History	3
Electives	6

Fourth Semester	Units
Plant Identification	3
Cut-Flower and Greehouse Production	3
Business Practices in Ornamental Horticulture	3
Physical Education	½
Elective	6

Nursery and Garden Center Operation

Students who complete the Curriculum in Nursery and Garden Center Operation satisfactorily are qualified for employment in the wholesale and retail nursery businesses as growers, propagators, salespeople, and seedsmen. Graduates of this two-year course of study may also take civil service examinations for positions as spray-control operators and supervisors, weed-seed analysts, farm and garden supervisors, horticultural inspectors, and plant propagators.

The course of study includes instruction in nursery operation, principles of ornamental horticulture, plant identification, the use of horticultural machines, and business practices in the ornamental horticultural industry.

First Semester	Units
Business Arithmetic	2
Communications	3
Introduction to Ornamental Horticulture(A)	3
Plant Identification	3
Personal Health	2
Physical Education	½
Electives	3
	16½

Second Semester	Units
Communication or Elective	3
Introduction to Ornamental Horticulture(B)	3
Plant Identification	3
Horticultural Machines	3
Physical Education	½
Electives	3
	15½

Third Semester	Units
Plant Identification	3
Nursery Operation	3
Physical Education	½
U. S. History	3
Electives	6
	15½

Fourth Semester	Units
Plant Identification	3
Nursery Operation	3
Business Practices in Ornamental Horticulture	3
Physical Education	½
Electives	6
	15½

Agronomy

Orange Coast College
Costa Mesa, California

The two-year program leading to the Associate in Arts degree in Agronomy is a recent addition to the agricultural offerings at the Orange Coast College. While primarily designed as preparation for employment or self-employment in agriculture, those students completing the course with better than average grades and meeting certain other requirements may transfer to a four year college.

Considerable acreage is available to students for field and vegetable crops projects. All necessary tractors and equipment are available for the planting, cultivating and harvesting of these projects.

First Year

Fall	Units	Spring	Units
Field Crop Production	3	Forage Crops	3
Farm Power	4	Farm Equipment	4
Ag. Conference	1	Farm Management	3
Psychology	3	Ag. Conference	1
English	3	Sociology	2
Electives	2	English	3
Physical Education	½	Physical Education	½
	16½		16½

Second Year

Fall	Units	Spring	Units
Plant Diseases and Pests	3	Soils	3
Tractor Skills	2	Vegetable Production	3
History	3	Political Science	3
Business Education	3	Health Education	2
Electives	5	Electives	5
Physical Education	½	Physical Education	½
	16½		16½

Ornamental Horticulture - Floriculture Option

Example Curriculum
W. J. Brookings and
H. N. Hunsicker
Agricultural Education Magazine
Vol. 38, No. 12, June, 1966

	Class	Lab.	Outside Study	Total
First Semester				
Chemistry	3	3	6	12
Communication Skills	3	0	6	9
Mathematics	3	0	6	9
Horticulture I	2	6	4	12
Botany	3	3	6	12
	14	12	28	54
Second Semester				
Technical Reporting	2	2	4	8
Floriculture I	1	6	2	9
Herbaceous I	1	2	2	5
Wood Plants I	2	2	4	8
Horticulture II	2	6	4	12
Entomology I	3	3	6	12
	11	21	22	54

Summer Session

Studies to meet special requirements of State or Institution; and/or approximately 12 weeks of full-time practice in floriculture on the job, or as provided by the college.

	Class	Lab.	Outside Study	Total
Third Semester				
Flower Shop Management I	1	3	2	6
Greenhouse Management I	2	6	4	12
Herbaceous Plants II	1	3	2	6
House and Conservatory Plants I	2	2	4	8
Industrial Organization & Institutions	3	0	6	9
Plant Pathology	3	3	6	12
	12	17	24	53
Fourth Semester				
Flower Shop Management II	2	6	4	12
Greenhouse Management II	2	6	4	12
House & Conservatory Plants II	1	2	2	5
Salesmanship	3	0	6	9
Indoor Landscaping	1	2	2	5
Business Organization & Management	3	0	6	9
	12	16	24	52

V

ANIMAL SCIENCE

The two-year courses in the area of Animal Science are called: Animal Science Technology, Animal Husbandry, and Poultry and Livestock. Some of the courses specialize in dairy or poultry or large animals. Some of these courses are designed for farming and others are directed toward services to farmers. The courses all include animal science courses as well as general education. This is then combined with different courses such as agronomy, farm management, farm mechanics, and agricultural business.

Following are examples of course offerings in different areas of Animal Science.

Animal Science Technology

Agricultural and
Technical College
Delhi, New York

Students majoring in Animal Science Technology are prepared to assist the veterinarian in animal care, inspection, hospital and clinical practice, animal colony and research work.

First Year

First Term	Credits
Livestock Production	3
Dairy Food Science	3
Division Orientation	0
College Math	3
Physical Education	1
General Chemistry	4
American Government	3

Second Term	Credits
Mammalian Anatomy and Histology	5
English Composition	3
Physical Education	1
General Microbiology	4
Organic and Biological Chemistry	4

Third Term	Credits
Dairy Food Microbiology	5
Pathogenic Microbiology	4
Health	1
Quantitative and Instrumental Analysis	4
Mammalian Physiology	4
Electives	3

Second Year

Fourth Term	Credits
General Pathology	3
Animal Parasitology	3
Animal Care and Anesthesia	3
English Composition	3
Introductory Psychology	3
Elective	3

Fifth Term	Credits
Animal Nutrition	3
Hematology and Urinalysis	3
Zoonoses and Animal Res.	3
Radiology and Animal Care	3
Introductory Economics	3
Elective	3

Sixth Term	Credits
Food Sanitation and Meat Inspection	4
Histological Techniques	2
Animal Lab Practices and Axenic Techniques	4
English Composition	3
Seminar	2
Elective	3

Animal Science

Stockbridge School of Agriculture
University of Massachusetts
Amherst, Massachusetts

The curriculum in Animal Science is designed to prepare students for careers in the broad field of the animal, dairy and poultry sciences: (1) by providing the students with an understanding of the fundamental biological and biochemical principles involved in the development of more efficient animals and birds, and more acceptable and useful animal products; (2) by presenting an opportunity in the various laboratories to apply those principles in selecting, breeding, feeding and managing the different classes of livestock, poultry and laboratory animals; (3) by supplementing the major course offerings with supporting courses in Agricultural and Food Economics, Agricultural Engineering, Plant and Soil Science, Entomology, Food Science and Technology, Mathematics, Microbiology and Veterinary Science; (4) by improving communication skills through courses in English and Speech.

The program includes four semesters of resident instruction. A three-month placement training program follows the second semester of instruction.

First Year

First Semester	Credits	Second Semester	Credits
Principles of Economics	3	Structures and Utilities	3
Introductory Animal Science	3	Principles of Livestock Feeding	3
General Dairying	3	Animal Biology	3
Mathematics	2	Poultry Management	3
Soil Management	3	Business English	2
Chemistry	3	Livestock and Forage Crop Insects	2
Physical Education	0	Physical Education	0

Second Year

First Semester	Credits	Second Semester	Credits
Farm Management	3	Livestock Production	3
Animal Breeding	3	Dairy Cattle Management	3
Marketing Animal Products	3	Field Crops	3
Animal and Poultry Products	3	Speech	2
Animal Diseases	3	Elective	
Elective		Drainage and Irrigation	3
Accounting Principles	3	Business Law	3
Machinery	3	Special Problems in Poultry	3
Bacteriology and Community Hygiene	3		

Animal Husbandry

Agricultural and Technical
College
Cobleskill, New York

The Division of Agriculture offers two majors within the major field or Animal Husbandry: (a) Beef, and (b) Dairy.

To fulfill requirements for the Associate in Applied Science degree, the candidate in the major field of Animal Husbandry - Beef or Animal Husbandry - Dairy must complete satisfactorily two year program with a minimum of 66 credit hours of academic work, including 34 hours in the major field, 23 hours in prescribed areas of General Education, and 9 hours of electives.

Animal Husbandry - Beef	Credits
Meat Products I	3
Soil Science I	3
Animal Husbandry	3
Beef Production	3
Animal Nutrition	4
Agricultural Mechanics or Introduction to Agricultural Machinery	3
Animal Husbandry Techniques	2
Advanced Beef Production	2
Farm Management I	3
Animal Breeding	3
Forage and Seed Crops	3
Animal Health	2
	34

Animal Husbandry - Dairy	Credits
Soil Science I	3
Animal Husbandry	3
Animal Nutrition	4
Livestock Selection and Showing	2
Agricultural Mechanics or Introduction to Agricultural Machinery	3
Dairy Cattle Management	3
Animal Husbandry Techniques	2
Farm Management I	3
Animal Breeding	3
Farm Management II	3
Forage and Seed Crops	3
Animal Health	2
	34

General Education Requirements for both majors:		Credits	
English EN 101-102	Freshman English I and II	6	
Natural Sciences BI 101-104	General Biology and Genetics, Physiology	6	
Health HE 101-102	Health and Physical Education I and II	2	
Social Sciences SS 101-102 HY 101-102	American Community I and II or History of Western Civilization I and II	6	
Psychology PY 111	Psychology	3	23
Electives General Education		6	
Other than AH courses		3	9
			66

Poultry and Livestock Technology

Wilkes Community College, Wilkesboro, N. Carolina
Wayne Technical Institute, Goldsboro, N. Carolina
Forsythe Technical Institute, Winston-Salem,
North Carolina

The content of this curriculum is designed to give students a good understanding of the principles, methods, techniques and skills which are essential for successful employment in the poultry and livestock industry. Improved methods and mechanizations in the poultry and livestock industry require technically trained people. Advanced techniques and skills are needed in the production, processing, storage and marketing of poultry and livestock and their products.

The objectives of the Poultry and Livestock Technology Curriculum are to develop understanding and ability in:

1. Production, marketing, processing, and distributing livestock and poultry and their products according to the scientific principles essential to efficient and profitable operation.
2. Specializations of livestock and poultry industry, including automation, materials handling, manpower efficiency, production control, schedules and contractual arrangements; vertical and horizontal integration.
3. Practical principles of our economic system with emphasis on governmental policies and programs pertaining to agricultural production and marketing.
4. Effective communication and human relations in dealing with human behavior problems connected with the production, marketing, and distribution of agricultural products and supplies.

First Quarter	Credits
Grammar	3
Business Mathematics	5
Animal Science	6
General Poultry Science	4

Second Quarter	Credits
Composition	3
Introduction to Agricultural Economics	4
Chemistry	5
Soil Science & Fertilizers	6

Third Quarter	Credits
Report Writing	3
Animal Nutrition	6
General Poultry Science	3
Plant Science	6

Fourth Quarter	Credits
Oral Communication	3
Dairy and Beef Production	6
Farm Business Management	6
Poultry Health	4

Fifth Quarter	Credits
Agricultural Marketing	6
Livestock and Poultry Housing and Equipment	4
Social Science Elective	3
Electives	6

Sixth Quarter	Credits
Swine Production	4
Agricultural Mechanization	4
Social Science Elective	3
Electives	5

VI

FORESTRY AND CONSERVATION

Forestry and Conservation constitute an area of growing interest on the part of students and educators. Broad technological advancements have been made in the field of forestry and conservation during the past decade. These advancements have resulted in the need for trained technicians to assist the professional in the various activities related to the production of our natural forest for maximum income, use, and service and at the same time, conserving our natural resources. The public forest agencies, the forest industries, as well as all areas within the broad field of conservation, need technicians to assist their professional personnel.

Post high school programs are being established in several states while others have placed increased emphasis on the technician phases within the established university programs. The programs reported here are only representative of the growing post high school programs.

Forestry Technology

Wayne Technical Institute
Goldsboro, North Carolina

The purpose of the Forestry Technology curriculum is to help students acquire technical knowledge, understandings and abilities essential in developing for maximum production and income, yet conserving our forests and water resources. The objectives are to develop student understanding and ability in:

1. The principles and practices involved in the production and utilization of our forests and the conservation of our forest and water resources, with emphasis on practical application.

2. Communicating effectively and dealing with individual human behavior in working with the public.

Graduates should be qualified for entry into positions as forest technicians with federal and state forestry agencies and private forest industries. The graduate will have abilities in: timber cruising and marking trees, forest surveying, log and tree scaling, procuring forest products, supervising forest cutting operations, locating and maintaining forest roads and improvements, forest protection, operating forestry equipment, preparing records, and performing various related technical activities.

Forestry Technology Course Description

Wayne Technical Institute
Goldsboro, North Carolina

First Quarter	Credits
Grammar	3
Technical Mathematics	5
Technical Drafting	2
General Forestry	3
Tree Identification	3
Safety and Woodsmanship	1

Second Quarter	Credits
Composition	3
Wildlife Science	4
Forest Botany and Ecology	6
Forest Soils	3
Economics	3

Third Quarter	Credits
Report Writing	3
Topographic Drawing	3
Forest Tree Measurements	4
Applied Silviculture	5
Surveying	4

Fourth Quarter	Credits
Oral Communication	3
Forest Surveying	3
Forest Equipment	4
Timber Cruising	5
Business Law	3

Fifth Quarter	Credits
Forest Aerial Photography Interpretation	3
Forest Improvements	3
Logging	4

Sixth Quarter	Credits
Forest Recreation	3
Forest Insects and Diseases	3
Forest Fire Control	3
Forest Field Siminar	4

Electives

Forestry	Credits
Soil Classification	4
Properties of Matter	4
Technical Mathematics	5
Project Supervision in Forestry	3
Forestry Genetics Field Work	2
Business Management	3
Principles of Supervision	3
Office Machines	3
Personnel Management	3
Accounting	6

Social Science	Credits
Social Science I	3
Social Science II	3
Applied Psychology	3
American Institutions	3
United States Government	3
Rural Society	3

Forestry and Conservation

Forest Ranger School
Lake City Junior College and
Forest Ranger School
Lake City, Florida

The purpose of the Ranger School is to train technicians for the field of forestry and the forest industries of the nation. The eleven month course represents the maximum training in the minimum time in practical applied forestry. Emphasis is placed on giving the student a sound practical background of combined field and classroom work adequate to meet the immediate demands of the first forestry work undertaken by the graduate.

First Semester	Credits
English, Report Writing, Speech	4
Human Relations	2
Forest Mathematics	4
General Forestry	2
Artificial Reforestation	2
Forest Protection	3
Lettering and Drafting	2
Dendrology	3
Botany and Soils	3

Second Semester	Credits
Photogrammetry	3
Human Relations	2
Mensuration	4
Artificial Reforestation	2
Forest Protection	3
Logging and Lumbering	3
Surveying	4
Silviculture	3
Forest Economics	2

Third Semester	Credits
On-the-job training	4
Mensuration	3
Student Tour	2
Surveying	4

Soil Conservation Technology

Wayne Technical Institute
Goldsboro, North Carolina

The purpose of the Soil Conservation Technology Curriculum is to help students acquire knowledge, understandings and abilities essential in conserving soil and water resources. The specific objectives are to develop the following student competencies:

1. Understanding of the principles involved in soil and water conservation.

2. Understanding of farm production problems as related to soil and water conservation.

3. Ability to supply farmers, ranchers, and others with technical assistance in planning, applying and maintaining measures and structural improvements for soil and water conservation.

4. Ability to communicate effectively and to deal with individual human behavior problems in working with farmers and ranchers.

First Quarter	Credits
Grammar	3
Technical Mathematics	5
Technical Drafting	2
Animal Science	6
Physics	4

Second Quarter	Credits
Composition	3
Chemistry	5
Introduction to Agricultural Economics	4
Soil Science and Fertilizers	6

Third Quarter	Credits
Report Writing	3
Chemistry	5
Surveying	4
Plant Science	6

Fourth Quarter	Credits
Oral Communications	3
Weed Identification and Control	3
Soil Fertility	4
Soil Classification	4
Soil Conservation I	5

Fifth Quarter	Credits
Farm Forestry	3
Soil Conservation II	5
Pastures and Forage Crops	4
Social Science Elective	3
Elective	3

Sixth Quarter	Credits
Soil Conservation III	5
General Bacteriology	4
Social Science Elective	3
Elective	3

Conservation Technology

Oshkosh Technical Institute
Oshkosh, Wisconsin

Conservation Technology is designed to offer a program which becomes progressively technical in its dealing with natural resource management.

In the first year, the student acquires background information in the basic sciences, mathematics, and general conservation. This provides him with the basic information necessary to understand the more technical aspects of soil conservation, game management, forestry, and fish management that are studied intensively during the second year of the Conservation program.

Because most employment opportunities for which conservation graduates qualify involve outdoor work, the number of hours spent in actual field and laboratory situations becomes progressively greater with each semester.

First year students work on field and laboratory problems in plant and animal classifications, land use, and general conservation techniques applicable to each. Second year students study field problems and techniques in game management, forestry, fish management, outdoor recreation, and soils. They learn to cruise timber, collect and study fish, layout contour strips, design a farm pond, census wildlife, and many other techniques required for a job in conservation.

First Semester	Credits
Psychology of Human Relations	3
Technical Math I	5
Communication Skills I	3
Basic Conservation	3
Botany	4
	18

Second Semester	Credits
Technical Math II	4
Chemistry	4
Communication Skills II	3
Zoology	4
Ecology	3
	18

Third Semester	Credits
American Institutions	3
Surveying I	2
Forestry I	4
Game Management	4
Soil and Water Conservation	3
	16

Fourth Semester	Credits
Economics	3
Surveying II	2
Conservation Problems	2
Forestry II	4
Fish Management	4
Soil and Water Conservation Engineering	2
	17

Outdoor Recreation - Conservation Technology

Treasure Valley Community College
Ontario, Oregon

This program is designed to prepare personnel for employment in the growing field of outdoor recreation. The curriculum is constructed to allow students to become prepared in various outdoor and recreational living skills and knowledge by receiving formal classroom instruction and participation in actual supervisory situations involving outdoor recreation.

Treasure Valley Community College maintains an "open door" admission policy, in that students who can profit from instruction may enroll. Students desiring to complete the program and graduate with an Associate in Science Degree must have graduated from an accredited high school or completed the General Education Development equivalency plus completed appropriate scholastic evaluation of previous education or experience.

Persons who have had work experience or special training may be able to substitute such experience and training for certain courses through comprehensive testing and evaluation. By this method, a student may considerably shorten the time required for completion of the minimum requirements for graduation. He may also use the extra time available to broaden his training field by taking extra General Education courses or other technical courses in Agriculture or related fields.

First Term	Units
Communication Skills	3
Mathematics	3
Basic Agricultural Mechanics	3
Soils and Conservation	5
Physical Education	1

Second Term	Units
Mathematics	3
First Aid	3
Techniques of Outdoor Recreation	3
Sports Equipment Repair	3
Physical Education	1
Electives	3

Third Term	Units
Public Speaking	3
Drafting	3
Mathematics	3
Agricultural Surveying	4
Techniques of Outdoor Recreation	3
Swimming	1

Fourth Term	Units
Psychology of Human Relations	3
Work Experience	1
Range and Forest Plant Identification	3
Techniques of Outdoor Recreation	5
Science Elective	4

Fifth Term	Units
Communication Skills	3
American Institutions	3
Health Education	3
Work Experience	1
Techniques of Recreation Camp Counseling	3
Science Elective	4

Sixth Term	Units
Technical Report Writing	3
Applied Economics	3
Work Experience	1
Administration of Recreation Camps	4
Emergency Care and Rescue	2
Science Elective	4

VII

PRODUCTION AGRICULTURE

The courses in the area of Production Agriculture are called: Agriculture Technician, Terminal Agriculture, Agriculture Science, Agricultural Technology, Technical Agriculture, Ranch and Range Management, Ranch Operation, and others. The thing that all have in common is that they are not limited to any one phase of agriculture such as agronomy or animal science. Some schools offer two different courses which fall into this general category. Most of the courses are designed for farming, a few are directed toward service to farmers, and some allow transfer of credit to four-year institutions. Both nine month or two semester and two year courses are found in this area.

Production Agriculture

Willmar Area Vocational-
Technical School
Willmar, Minnesota

The Production Agriculture course is designed to acquaint the student with modern application of science and the best in business training needed by the farmer of today. Classes will consist of lecture, laboratory work, field trips and guest lectures on farm management. The course will consist of nine months, six hours per day of class, five days per week.

Course	Credits
Farm Management	9
Farm Law, Math, and Communications	9
Agricultural Mechanics	18
Plant Science	6
Animal Science	6
Soil Science	6
	54

Ranch Operation

Eastern Oklahoma A & M College
Wilburton, Oklahoma

The primary purpose of the Ranch Operation program is to provide training for individuals interested in the work of ranch operation and management. The program includes a two semester practical training course in ranch operation, including:

- Classroom study
- Practical on-the-job training
- Field trip study of all phases of ranch operations.

The program is not a conventional text book course, but a combination of study, observation, and practical training.

High school graduates, or mature persons not high school graduates, who are sincerely interested in practical ranch management may apply for enrollment.

Due to the specialized nature of the program the enrollment will be kept small. A personal interview is conducted prior to final acceptance in the program.

The student will "learn by doing" practical jobs such as: handling livestock, dehorning, spraying, vaccinating, branding, castrating, fitting and showing, selection, feeding, butchering, fencing, haying, weed and brush control, sprigging bermuda, pasture seeding and fertilizing, etc.

First Semester	Credits	Second Semester	Credits
Ranch Management	3	Ranch Management	3
Farm and Ranch Finance and Records	3	Hay, Forage and Pastures	3
Hay, Forage, and Pastures	3	Livestock Production	3
Livestock Production	3	Ranch Animal Anatomy and Diseases	3
Feeds and Feeding	3	Feeds and Feeding	3
Livestock Marketing and Processing	3	Livestock Marketing and Processing	3
	18		18

Agriculture Production

Centralia Community College
Centralia, Washington

The programs in agriculture at Centralia College are prepared to transfer to any four-year college. However, students who do not plan to continue beyond the two-year program may also enroll. A wide range of offerings in all fields allows the pre-agriculture student to complete a two-year curriculum. Close liaison is maintained with Washington State University and considerable academic guidance in course selection is offered to pre-agricultural majors.

Two-Year Sequence

First Year

Fall Quarter	Credits	Winter Quarter	Credits
Introductory Chemistry	5	Fundamentals of Chemistry	5
Field Crops	5	Animal Science	5
Zoology or Botany	5	Principles of Accounting	4
Physical Education	1	Physical Education	1

Spring Quarter	Credits
Fundamentals of Organic Chemistry	5
Horticulture	5
Speech	3
Health	2
Physical Education	1

Second Year

Fall Quarter	Credits	Winter Quarter	Credits
Dairy Science	5	Soils	5
Mathematics	5	Introduction to Economics	5
English	3	Sociology	5
Social Science	2		

Spring Quarter	Credits
Plant Propagation	5
Forestry	3
Business Law	5
Elective	3-5

Agriculture - Farm Management and Operation

Joliet Junior College
Joliet, Illinois

A student may enroll in either of two types of programs: (a) if he plans to transfer to a four-year college, he will enroll in a transfer program and (b) if he plans to terminate his college work in two years or less, he will enroll in one of the general, technical, or vocational curricula.

The program in Agriculture - Farm Management and Operation is designed for the student who does not intend to continue his education beyond the second year. The program is specifically designed for the student who wishes to broaden his knowledge in the field of production agriculture before returning to active farming. Modern farming requires a high degree of technical skill and knowledge. Additional training beyond high school must be designed to improve his proficiency in farming and farm management.

First Year

First Semester	Hours	Second Semester	Hours
Communication Skills	3	Communication Skills	3
Agricultural Economics	3	General Botany	5
Dairy Farming	3	Principles of Feeding	3
General Chemistry	5	Soils	3
Speech	3	Agricultural Computations	2
	17		16

Required Summer Program

Supervised work experience placement in farming or farm management is required between the second and third semester.

Second Year

Third Semester	Hours	Fourth Semester	Hours
Agricultural Chemicals and Supplies	3	Crop Production	4
Survey of Political, Sociological and Economic Problems	4	Farm Management	5
Marketing Agricultural Products	3	Principles of Economics	3
Accounting	3	Agricultural Credit and Finance	3
Principles of Agricultural Mechanics	3	Real Estate	3
	16		18

Terminal Agriculture

Northeastern Junior College
Sterling, Colorado

Terminal Agriculture offers a curriculum primarily intended for those students who wish to profit by one or two years of college education and technical training, but do not intend to continue these studies at a four year college or university.

Any student who has been granted admission to Northeastern Junior College may enroll in Terminal Agriculture.

Terminal Agriculture - Two Year Program

Freshman Year	Credits	Sophomore Year	Credits
The Agriculture Profession	1	Related Agriculture	17
Related Agriculture	12	Income Tax	3
Mathematics of Business	5	General Botany	5
General Botany	5	Economic Organization of Agriculture	3
Chemistry	5	Farm Shop Courses	8
Principles of Economics I	3	Speech	3
Farm Power	3		
English Composition	6		
Social Science	9		
Physical Education	3		

Other Agriculture Programs

Several programs were listed under the general headings of Agriculture in the informational brochures or catalogs which did not fit into the usual categories. These programs have been included as miscellaneous programs for organizational expediency and reflect no judgment as to the quality or value of the program.

Food Processing Industry

College of Agriculture
Michigan State University

The Food Processing Industry program starts in late September and is of 18 months duration, including one year of on-campus study and six months of industry employment. The MSU program coordinator serves as placement officer for graduates, and works withthe student and employer in arranging and supervising on-the-job training.

First Year

Fall Quarter	Credits
Writing and Speaking	3
Biochenistry	4
Personnel Practices	3
Effective Study & Reading	2
Quality Control	4

Winter Quarter	Credits
Food Plant Engineering	5
Food Processing ProceduresII	5
Food Plant Sanitation	3
Elective	
Marketing Agricultural Products	3
Business	3

Spring and Summer Quarters

On-the-job training

Second Year

Fall Quarter	Credits
Food Plant Engineering	5
Food Processing Procedures II	5
Food Plant Sanitation	3
Elective	
Marketing Agricultural Products	3
Business	3

Winter Quarter	Credits
Food Plant Supervision	3
Food Processing Procedures IV	5
Seminar	1
Psychology	4
Elective	
Financial and Credit Practices	3
Salesmanship	3

Food Processing Technology

Wilkes Community College
Wilkesboro, North Carolina

The Food Processing Technology curriculum is designed to give students an understanding of the principles, methods, techniques, and skills which are essential for successful employment and advancement in the food processing industry.

Improved methods of production and scientific advances in the food processing industry make it necessary to employ skilled and highly trained technicians throughout all phases of the industry. The two-year graduate that possesses an Associate in Applied Science degree in Food Processing Technology is in an excellent position to enter and advance in this automated industry.

First Quarter	Credits
Grammar	3
Technical Mathematics	5
Plants for Processing	4
Animals for Processing	4
Elements of Food Processing	3

Second Quarter	Credits
Composition	3
Chemistry	5
General Microbiology	4
Food Processing Mechanics	4
Food Processing - Heat Preservation	3

Third Quarter	Credits
Report Writing	3
Chemistry	5
Introduction to Agricultural Economics	4
Microbiology of Foods	4
Food Processing Cold Preservation	3

Fourth Quarter	Credits
Oral Communication	3
Chemistry	5
Sales Development	3
Food Processing Elective	5

Fifth Quarter	Credits
Social Science Elective	3
Food Packaging	3
Materials Handling	3
Food Plant Equipment Maintenance	3
Food Processing Elective	5

Sixth Quarter	Credits
Social Science Elective	3
Grading and Judging Food Products	4
Food Plant Sanitation	4
Electives	6

Agricultural Chemicals Technology

Guilford Technical Institute
Jamestown, North Carolina

The curriculum in Agricultural Chemicals Technology will prepare students for entry into the rapidly growing field of agricultural chemicals, involving the development, testing, production, sales, and application of pesticides and fertilizers. The industry supplies thousands of dusts, sprays, and granules to the agricultural producer to control pests and a huge variety of fertilizer materials to produce his crops. Agricultural chemicals are utilized in all crop and livestock production.

The Agricultural Chemicals Technology Curriculum will give the student a functional understanding of:

1. The basic agricultural sciences relating to the agricultural chemicals industry.

2. Applied chemistry.

3. Business organization, procedures, and management of firms producing, marketing and applying agricultural chemicals.

4. Formulation and use of farm chemicals and their relation to profitable agricultural production, including safety procedures.

A broad base of general technical courses is combined with selected courses in entomology, pathology and chemistry and their application to agricultural production.

Each phase of the agricultural chemicals industry offers employment opportunities for technically trained individuals in sales, research, production and manufacturing, management and custom farm application. Positions are available in the larger companies as well as in the smaller farm supply businesses. New uses for agricultural chemicals are developing rapidly, creating challenging and well-paying jobs.

Agricultural Chemicals Courses

First Quarter	Credits
Grammar	3
Introduction to Business	5
Business Mathematics	5
Animal Science	6

Second Quarter	Credits
Composition	3
Chemistry	5
Introduction to Agricultural Economics	4
Soil Science and Fertilizers	6

Third Quarter	Credits
Report Writing	3
Entomology	3
Chemistry	5
Plant Science	6

Fourth Quarter	Credits
Oral Communication	3
Chemistry	5
Plant Pathology	4
Weed Identification and Control	3
Crop Insects	4

Fifth Quarter	Credits
Fertilizers and Lime	4
Sales Development	3
Agricultural Chemistry	5

Sixth Quarter	Credits
Livestock Diseases and Parasites	4
Pesticide Application	3
Garden, Fruit, and Household Pests	4

Electives

Agricultural Chemicals	Credits
Business Management	3
Business Law	3
Principles of Supervision	3
Soil Fertility	4
Quantitative Chemical Analysis	5

Social Science	Credits
Social Science I	3
Social Science II	3
Applied Psychology	3
American Institutions	3
United States Government	3
Rural Sociology	3

Welding

Yuba College
Marysville, California

Today the welding industry plays an indispensable part in Mechanized Agriculture, Construction, Repair, and in Industry. The welding industry offers unlimited opportunities to the students who become well trained in this field.

Yuba College offers an occupational curriculum in welding which leads to the Associate in Arts Degree. The course requirements for this curriculum are as follows:

Welding Requirements	Units
Ag. 80A-80B Farm Mechanics	4
Ag. 81A-81B Arc Welding	4
Ag. 82A-82B Acetylene Welding	4
Ag. 85 Advanced Welding	2
Ag. 90 Agricultural Project	2
Drafting 50, Drafting I	3
Elective	1
	20

Recommended Academic Requirements	Units
Business Organization 50	3
English 1A-1B	6
Fine Arts Requirement	6
Sociology 10	3
Hygiene I	2
P. E.	2
Physical Science 50A	3
Political Science 1	3
Psychology 50	½
Soil Science 74	3
	30½

Recommended Electives	Units
Ag. 51 Farm Accounting	3
Bus. N54 Elementary Business Mathematics or Bus. 55 Business Mathematics	3
Machine Shop 60, Basic Machine Tools	3
Machine Shop 61, General Machine Shop	3
	12

Total Required Units - 62½

Animal Hospital Technology

Central Carolina Technical
Institute
Sanford, North Carolina

The Animal Hospital Technology curriculum is designed to provide technical training for young men and women as animal hospital assistants, animal research, clinical laboratory, or small animal care technicians.

The objective of the Animal Hospital Technology curriculum is to develop knowledge, understanding and ability in the:

1. Principles and procedures of a technical and practical nature involved in operation of an animal hospital.
2. Skills needed in assisting the professional worker with the reception, observation, care and treatment of animals.
3. Performance of certain laboratory tests involved in animal care and research, under professional guidance and direction.
4. Effective communication and human relations in the animal science field.

First Year

First Quarter	Credits
Grammar	3
Business Mathematics	5
Introduction to Animal Hospital-Technology	3
Chemistry	5
Small Animals	3

Second Quarter	Credits
Composition	3
Chemistry	5
Anatomy and Physiology	5
Animal Health and Sanitation	4

Third Quarter	Credits
Report Writing	3
Animal Care	5
Animal Nutrition	4
Laboratory Techniques	4
Public Relations and Ethics	1

Second Year

Fourth Quarter	Credits
Oral Communication	3
Animal Parasitology	3
Animal Pathology	3
Laboratory Techniques	4
Accounting	6

Fifth Quarter	Credits
Medicant and Medication	3
Surgical Procedures	4
Laboratory Techniques	4
Office Practices	3
Social Science Elective	3
Elective	3

Sixth Quarter	Credits
Special Problems	3
Animal Health Programs	3
Large Animal Care	4
Social Science Elective	3
Elective	3

Wood Utilization

Stockbridge School of Agriculture
University of Massachusetts
Amherst, Massachusetts

The wood utilization curriculum provides a foundation for employment in sawmills, wood processing and fabricating industries, wholesale and retail lumber yards and in sales organizations. The curriculum provides a basic study of the fundamental nature and properties of wood, with courses dealing with the processing and application of wood for specific areas of use. The program is strengthened by appropriate course work in English, mathematics, economics and business practice. Summer placement training between the first and second year offers valuable contact with some phase of the wood-using industries.

First Year

First Semester	Units	Second Semester	Units
Principles of Economics	3	Accounting Principles	4
Forest Tree Identification	3	Structures and Utilities	3
Mathematics	3	Business English	2
Plant Science	3	Speech	2
Wood Anatomy and Identification	3	Lumber Manufacturing and Properties	5
Physical Education	-	Physical Education	-

Summer Session

Three months of placement training

Second Year

First Semester	Units	Second Semester	Units
Business Management	3	Accounting Principles	4
Power Units	3	Business Law	2
Report Writing	2	Salesmanship and Sales Management	3
Forest Products other than Lumber	3	Physics	3
Wood Seasoning and Preservation	4	Secondary Wood Processing	5

SUMMARY

The primary purpose of this study was to present the current picture of the post high school programs in agriculture in the United States. A general survey was made of the one and two year post high school programs as listed by the U. S. Office of Education Directory for 1966-67. Usable material was received from 60 schools in 20 states.

The programs were reported under the following major headings:

A. Agricultural Mechanics

B. Agricultural Business

C. Plant and Soil Science

D. Animal Science

E. Forestry and Conservation

F. Production Agriculture

G. Other Agriculture

Nearly every institution described a wide range of opportunities for graduates in all phases of agriculturally related occupations. Brochures and catalogs were well written and painted an optimistic picture for prospective students. In many instances, the programs were just beginning and were established as the result of a growing demand by agriculturally related businesses and industries in the state.

APPENDIXES

APPENDIX A

COURSE DESCRIPTIONS BY STATE

Agriculture at the post high school level assumes many forms. There are variations within and between states, and courses with the same title may not necessarily include the same material. To give the reader a closer picture of the courses offered, college brochures and catalogs were examined and a short, single phrase or sentence abstract was made of each major course offering in Agriculture.

ARIZONA

Arizona Western College, Yuma, Arizona (Junior College)

Citrus Fruit Production

Preparation in the scientific aspects of citrus culture.

Agriculture Business Management

Practical experience in agriculture, business, and general education.

Ornamental Horticulture

Training in theory and practice for nursery landscaping and florist industries. Sales, production, and service areas are stressed.

General Agricultural Production

Study of production and management phases of agriculture.

ARKANSAS

Arkansas State College - Beebe Branch, Beebe, Arkansas (Junior College)

Agriculture

Training in the areas of general education and agricultural production.

Petit Jean Vocational-Technical School, Morrilton, Arkansas

Ornamental Horticulture and Landscaping

Training in the skills and knowledge of ornamental horticulture and landscaping.

CALIFORNIA

Coalinga College, Coalinga, California (Junior College)

Agronomy

Training in crops, weed and insect control, soils and irrigation, as well as general education.

Animal Science

Study of basic livestock and dairy operations as well as general education.

Agricultural Business

Farm and agricultural business management procedures, related course work in specific production areas, as well as general education.

Agricultural Engineering

Applied instruction in salable skills and knowledge in the areas of ageicultural mechanics.

Orange Coast College, Costa Mesa, California (Junior College)

Agronomy

Training in agronomy designed for employment or self-employment in agriculture.

Animal Husbandry

Animal husbandry designed for employment or self-employment in agriculture.

Ornamental Horticulture

Ornamental horticulture designed for employment in nusery and gardening areas.

Agri-Business (General)

A combination of agriculture education, business education, and general education. One may also major in Agri-Business (Agronomy), Agri-Business (Animal Husbandry), Agri-Business (Horticulture), and Agri-Business (Mechanics) by combining Agri-Business courses with another area of study.

Riverside Unified School District, Los Angeles, California

MDTA Groundsman-Gardener Course

Provides basic knowledge, skills, and practical experience for employment as semi-skilled workers as groundsmen - gardeners.

Yuba College, Marysville, California (Junior College)

Production Agriculture

Training for farming, farm management or serving as fieldman in production agriculture.

Agri-Business

Training geared toward salesman, fieldman and inspectors in the field of agriculture.

Mechanized Agriculture

Course work designed to develop mechanical skills in agricultural mechanics.

Welding

Training designed basically for agricultural welding and repair.

City College of San Francisco, San Francisco, California (Junior College)

Ornamental Horticulture (Commercial Cut-Flower and Greenhouse Production)

Training for employment in the cut-flower and greenhouse-production industries. Course includes commercial cut-flower and greenhouse production, business practices in the industry and general education.

Landscape Gardening

Training includes instruction in landscape design and construction, ornamental horticulture, plant identification, and business practices.

Nursery and Garden Center Operation

Students qualify for employment in the wholesale and retail nursery businesses as growers, propagators, salespeople and seedsmen.

Retail Floristry

Training in buying flowers, in the art of arranging and selling them, and in operating a retail flower shop.

College of the Sequoias, Visalia, California (Junior College)

Agriculture Engineering Technician

Designed to prepare students for farming or for jobs requiring practical agricultural training.

Agri-Business

Preparation for sales and service occupations connected with production, processing, and marketing of agricultural products.

Animal Science Technician

Designed to prepare for farming or jobs requiring practical agricultural training.

Plant Science Technician

Preparation for farming or jobs requiring practical agricultural training.

San Joaquin Delta College, Stockton, California (Junior College)

Agriculture Mechanics

Designed for students preparing for occupations in machinery sales and services.

Agri-Business

For students who plan to work in agricultural related businesses and industries. Includes agriculture, business, science, and general education.

Ornamental Horticulture

A course sequence in ornamental horticulture and plant science, coupled with business training.

Livestock Production

Program designed for students who seek employment in livestock production or businesses closely related to livestock production.

Horticulture and Viticulture

For students who wish to engage in tree crop and vine crop production or jobs in business closely related to tree and vine crop production.

Production Agriculture

For students to actively engage in the production of crops or livestock.

Mount San Antonio College, Walnut, California (Junior College)

Plant Science Technician

A course sequence for students entering the fields of crop production, inspection, food processing, or forestry.

COLORADO

Northeastern Junior College, Sterling, Colorado

Industrial Farm Chemicals Technology

Graduates advise farmers on the proper use of various farm chemicals in soil fertility and farm management programs.

Animal Science Technology

Graduates bring to the farmer reserach information in feeds and feeding, housing, sanitation, and parasite and disease control.

Terminal Agriculture

For those who wish one or two years of general education and technical training in agriculture. A general agriculture program.

FLORIDA

Lake City Junior College and Forest Ranger School, Lake City, Florida

Forest Ranger School

Train technicians in field of forestry and forest industries.

Ornamental Horticulture Technology

Training in handling, processing, marketing and growing of plants.

Turf-Grass Technology

Training in establishment and maintenance of recreation areas and public grounds.

Central Florida Junior College, Ocala, Florida

Agriculture Technology

A general agriculture program designed for agriculture production or business careers in agriculture.

IDAHO

College of Southern Idaho - Area Vocational School, Twin Falls, Idaho

Agri-Business

A course including general agriculture, general education, and business courses.

ILLINOIS

Chicago City Junior College - Woodrow Wilson Branch, Chicago, Illinois

Ornamental Horticulture

Designed to train for supervisory and managerial positions in horticulture.

Canton Community College, Canton, Illinois

Farm Machine Technology

Designed for farm machinery service and repair.

Danville Junior College, Danville, Illinois

Agricultural Mechanics

No description available.

Joliet Junior College, Joliet, Illinois

Agricultural Supply Curriculum

Designed for employment in agriculture supplies and service.

Agricultural Technology

Designed for knowledge in production agriculture before returning to active farming.

Wabash Valley College, Mount Carmel, Illinois (Junior College)

Agricultural Mechanics

For employment in the service and sales areas of agriculture mechanics.

Agri-Business

For employment and mid-management in agricultural sales and service.

IOWA

Eastern Iowa Community College, Muscatine, Iowa

Feed and Fertilizer Marketing Technology

Combines business and distributive education with technical agriculture to provide competencies required for employment in the grain, seed, fertilizer and agricultural chemical industry.

MASSACHUSETTS

Stockbridge School of Agriculture, University of Massachusetts, Amherst, Massachusetts (Land Grant College)

Agricultural Business Management

Training for management opportunities in agriculturally oriented companies.

Food Distribution

Designed to provide a background appropriate for placement in the food sciences and business management.

Animal Science

To prepare students as foremen, heardsmen, and managers of dairy, livestock, and poultry production enterprises.

Laboratory Animal Management

To prepare students as technicians in artificial breeding units, dairy herd improvement associations and animal research laboratories.

Arboriculture and Park Management

Training in the care of shade and ornamental trees and in various aspects of park management and general forest management.

Dairy Technology

Training for skilled workers in wholesale and retail dairy plants.

Landscape Operations

Training to handle the varied problems in landscape construction and maintenance.

Floriculture

Training in the production and marketing of flowers.

Fruit and Vegetable Crops

Training in the production and marketing of fruit and vegetable crops.

Turf Management

Training for skilled supervisors of cemetery and recreation areas.

Restaurant and Hotel Management

Designed for work as supervisors and managers in restaurants, hotels, clubs, and institutional food services.

Wood Utilization

Training in the manufacture and distribution of material processed from wood.

MICHIGAN

College of Agriculture, Michigan State University, East Lansing, Michigan (Land Grant College)

Commercial Floriculture

Preparation for work as a flower grower, greenhouse manager, salesman, designer, and florist.

Landscape and Nursery

Training in landscape construction of parks, estates, cemeteries, and industrial grounds.

Elevator and Farm Supply

Preparation for the feed, grain and farm supply industry.

Farm Equipment Service and Sales

Training in retail sales, servicing, and repairing of farm machinery.

Food Processing Industry

Preparation for laboratory and quality control technicians, supervisors of processing plants and sales and servicemen.

Turfgrass Management

Turfgrass technology necessary for management of golf courses and other recreational facilities.

Soil Technician

Prepares students to test soil and make fertilizer recommendations.

Michigan State also offers two-month programs in Commercial Vegetable Production, and Commercial Fruit Production.

MINNESOTA

Southwest Minnesota Vocational School, Jackson, Minnesota

Fertilizer and Agricultural Chemicals

To train workers in fundamentals of chemical theory, use of fertilizers and agricultural chemicals, and adjustment of various fertilizer and chemical spreaders.

Willmar Area Vocational - Technical School, Willmar, Minnesota

Agricultural Supplies Technology

Training for occupations in agricultural businesses that provide supplies and services for farmers.

Production Agriculture

Training designed for improved efficiency in farming.

MONTANA

School of Aeronautics and Related Trades - Helena Senior High School, Helena, Montana (Area Trade School)

Farm Machinery

Training for farm machinery mechanics, servicemen, assemblers, partsmen and salesmen.

NEW YORK

Agricultural and Technical College at Canton, Canton, New York

Agricultural Science

Sixty percent of courses are in general education. The remainder are in the field of applied agriculture.

Dairy Technology

Designed for quality control of milk products and dairy business practices.

General Agriculture

Designed for farming or businesses closely related to agricultural production.

Agricultural Engineering Technology

Training in the areas of farm machinery sales and services.

Agricultural Business

Training in the areas of business which supply and service the farmer.

Agricultural and Technical College at Cobleskill, Cobleskill, New York

Agricultural Business

Training for various fields associated with agricultural production and sales.

Agricultural Engineering Technology

Training in the use of farm machinery and the selling and servicing of it.

Agronomy

Training in soil testing, plant nutrition, and fertilizing procedures.

Animal Husbandry - Beef

Training in the purebred industry and the cow and calf programs.

Animal Husbandry - Dairy

Training in dairy production, processing and marketing organizations and related businesses.

Dairy Technology

Deals with the receiving, processing, manufacturing, inspecting, and laboratory control of dairy and food products.

Ornamental Horticulture - Floriculture

Training in floral design, greenhouse management, and operation of floral shops or greenhouse products.

Ornamental Horticulture - Nursery Management

Instruction in landscaping and nursery management.

Agricultural and Technical Institute at Delhi, Delhi, New York

Agricultural Business

Technical preparation in agriculture, combined with business training for business careers which serve agriculture.

Agricultural Engineering Technology

Training to assist professional engineers in basic engineering fundamentals and agriculture for the development of equipment for agricultural production and processing.

Animal Husbandry - Dairy

Training for production of dairy products, and for breeding technicians and fieldmen.

Animal Husbandry - Large Animal

Training in production of large animals and for breeding technicians and fieldmen.

Dairy Food Technology - Laboratory

Training in the application of labortory technology to quality control of milk and food products.

Dairy Food Technology - Management

Training in the management of dairy processing, packaging, and distribution.

General Agriculture

Training in the broad area of agricultural production.

Plant Science

General agricultural production with an emphasis on agronomy.

Animal Science Technology

Preparation for assisting the veterinarian in animal care, inspection, clinical practice, and research work.

Agricultural and Technical College at Farmingdale, Farmingdale, New York

Agronomy - Crop and Soil Science

Training in farm land management, agricultural planning, and production.

Animal Science

Deals with the science and principles of production, and processing of livestock and livestock products.

Poultry Science

Designed to provide training in nutrition, physiology, breeding, selection and management.

Food Processing Technology

Training in quality control, merchandising and research and development of foods and food products.

Floriculture Merchandising - Floriculture Production

Training in growing and selling flowers.

Landscape Development

Training in landscape construction and maintenance.

Nursery Management

Training in the propagation and growing of nursery plants.

Turf Management

Training for golf course and other recreational construction and maintenance.

Agricultural and Technical College at Morrisville, Morrisville, New York

Crop Science

Training in the areas of agronomy which deal with crop production.

Soil Science

Training in soil and water management.

Natural Resources Conservation

Training in the conservation of our natural resources.

Agricultural Business Program

For students who plan to work in agricultural-related businesses and industries.

Agricultural Engineering Technology Program

Training for employment in the field of agricultural equipment and machinery sales and services.

Agricultural Science Program

Designed mainly for students who plan to transfer to a four-year college.

Animal Husbandry Program

Training for students who plan to work closely with the raising of livestock and dairy.

Dairy Technology Program

Training for processing, and handling of dairy products.

Horticulture

Training in the broad field of horticulture with emphasis on floriculture and landscaping.

NORTH CAROLINA

Pitt Technical Institute, Greenville, North Carolina (Community College)

Agricultural Technology - Business

Designed to acquire knowledge and abilities in the broad field of agricultural business and production.

Cataba Valley Technical Institute, Hickory, North Carolina (Community College)

Agricultural Business

Designed to acquire knowledge and abilities in the broad field of agricultural business and production.

Ornamental Horticulture Technology

Training in plant and soil science with application for production, use, and maintenance of ornamental plants.

Lenoir County Community College, Kingston, North Carolina (Community College)

Agricultural Business Technology

Designed to acquire knowledge and abilities in the field of agricultural business.

Ornamental Horticulture

Preparation for services in fruit, vegetable crops, floriculture, nursery management, and landscaping.

College of the Albemarle, Elizabeth City, North Carolina (Community College)

Agricultural Business Technology

Designed to acquire knowledge and abilities in the field of agricultural business.

Fayetteville Technical Institute, Fayetteville, North Carolina (Community College)

Agricultural Business Technology

Same as above.

Guilford Technical Institute, Jamestown, North Carolina (Community College)

Agricultural Chemicals Technology

Prepares for the field of agricultural chemicals. Development, testing, production, sales, and application of pesticides and fertilizers.

Wilson County Technical Institute, Wilson, North Carolina (Community College)

Agricultural Equipment Technology

Designed to acquire knowledge and abilities in agricultural equipment sales and services.

Randolph Technical Institute, Asheboro, North Carolina (Community College)

Agricultural Business Technology

Same as above.

Central Carolina Technical Institute, Sanford, North Carolina (Community College)

Agricultural Business Technology

Same as above.

Animal Hospital Technology

Designed to provide training for animal hospital assistants, animal research, clinical laboratory, or small animal care technicians.

Wilkes Community College, Wilkesboro, North Carolina

Agricultural Business Technology

Same as above.

Food Processing Technology

Gives students an understanding of the principles, methods, techniques, and skills in the food processing industry.

Poultry and Livestock Technology

Designed to give an understanding of the principles, methods, techniques, and skills in the poultry and livestock industries.

Surry Community College, Dobson, North Carolina

Agricultural Business Technology

Same as above.

Wayne Technical Institute, Goldsboro, North Carolina (Community College)

Forestry Technology

Students acquire technical knowledge and abilities for maximum production and income, yet conserving our forests and water resources.

Soil Conservation Technology

Students acquire knowledge and abilities essential in conserving soil and water resources.

Poultry and Livestock Technology

Same as above.

Forsythe Technical Institute, Winston-Salem, North Carolina (Community College)

Ornamental Horticulture Technology

Preparation for services in fruit, vegetable crops, floriculture, nursery management and landscaping.

Agricultural Business Technology

Same as above.

Poultry and Livestock Technology

Same as above.

OHIO

Clark County Technical Institute, Springfield, Ohio

Agri-Business Technology

Training in the field of agricultural business.

Agri-Equipment Technology

Training in the sales and service of farm equipment and machinery.

OKLAHOMA

Eastern Oklahoma A & M College, Wilburton, Oklahoma (Junior College)

Forestry

Associate degree or preparation for a four-year college.

Agronomy

Associate degree or preparation for a four-year senior college.

Wildlife Conservation

Associate degree or preparation for a four-year senior college.

Animal Husbandry

Associate degree or preparation for a four-year senior college.

Ranch Operation

Practical training in ranch operation.

OREGON

Central Oregon Community College, Bend, Oregon

Forestry Technology

No description available.

Lane Community College, Eugene, Oregon

Farm Equipment and Service

Training for occupations in farm equipment repair and service.

Forest Technician

Training for placement as forest technicians with state and federal agencies, and private logging and lumber manufacturing operations.

Blue Mountain Community College, Pendleton, Oregon

Technical Agriculture

Training for jobs in the business, mechanical or productive phases of agriculture.

Treasure Vally Community College, Ontario, Oregon

Technical Agriculture

Train people to assist in management and economic problems involved in production, marketing, distribution services, and research.

Agricultural Equipment and Repair

Practical training in the repair and service of farm equipment.

Range/Ranch Management Technology

Designed to develop skills and knowledge in the technical areas of range and ranch management.

Outdoor Recreation-Conservation Technology

Designed to prepare for employment in the growing field of outdoor recreation.

Landscaping and Public Grounds Management

Designed to train for skilled technicians in the field of turf, shrubs, and ornamental growth and management.

SOUTH CAROLINA

Clemson University, Clemson, South Carolina

Ornamental Horticulture

An eight-week course for out-of-school youth to provide basic training in skills needed for employment in plant nursery work.

WASHINGTON

Green River Community College, Auburn, Washington

Agriculture

A general course designed for transfer to a four-year college.

Forestry

Training in forestry with emphasis on transfer to a four-year senior college.

Centralia Community College, Centralia, Washington

Agriculture Technician Program

Designed for students to find employment in some agricultural field.

Agriculture Production Program

Designed for students returning to production agriculture.

Clover Park Vocational-Technical School, Lakewood Center, Washington

Landscape Gardening and Grounds Maintenance

Training for work in landscaping, landscape gardening, greenhouse and nursery maintenance and grounds care.

Yakima Valley College, Yakima, Washington (Junior College)

Farm Machinery and Equipment

Training in the operation, servicing, and repair of farm equipment.

Agricultural Engineering Technician

Prepares for employment in services to agriculture or civil service positions in soil conservation, reclamation, forestry and land management. The main emphasis is on mathematics and engineering courses.

WISCONSIN

Kenosha Technical Institute, Kenosha, Wisconsin

Horticulture (Floriculture) Retailing Major

Training in all areas of horticulture with an emphasis on floriculture and retailing.

Horticulture (Floriculture) Porduction Major

Training in all areas of horticulture with an emphasis on floriculture production.

Oshkosh Technical Institute, Oshkosh, Wisconsin

Conservation

Designed to prepare for jobs dealing with natural resource management.

Wausau Technical Institute, Wausau, Wisconsin

Agricultural Equipment and Power Mechanics

Designed to prepare for repair and service of equipment and implements used in agriculture.

Agricultural Marketing Major

Training in business, marketing, sales and advertising of agricultural products.

WYOMING

Casper College, Casper, Wyoming

Agriculture

Classes in agriculture are arranged to meet the needs of the student who wishes to compelte his formal college work at Casper College or for the person who plans to obtain a degree.

APPENDIX B

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Office of Education
Division of Vocational and Technical Education
Washington, D.C. 20202

1966-67 Directory
One-Year and Two-Year Post High School Institutions Which Offer Programs of Instruction in Agriculture

Key to Areas of Specialization

1. Production Agriculture
2. Agri-Business
3. Agri-Mechanics
4. Food Processing
5. Ornamental Horticulture
6. Grain, Seed, Feed & Farm Supply
7. Forestry
8. General Agriculture
9. Poultry and Animal Science
10. Conservation and Recreation
11. Animal Hospital (Veterinary Aide)
12. Parks and Recreation Management
13. Farm and Ranch Management
14. Arboriculture
15. Agriculture Laboratory Technology
16. Pest Control

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
ARIZONA	Yuma	Arizona Western College 1, 2, 3, 5, 8, 9	George W. Brookbank
	Thatcher	Eastern Arizona Junior College 1, 2, 3, 7	Donald A. Foote
ARKANSAS	Russellville	Arkansas Polytechnic College	
	Beebe	Beebe Junior College 8	Denver Nettles
	Morrilton	Petit Jean Vocational-Technical School 5	Thurston Kirk, Dir. Jack McDuff, Instr.
	Magnolia	SouthernState College 3, 8	O. H. Childs
CALIFORNIA	Bakersfield	Bakersfield College 1, 2, 3, 5, 9	Holger Hansen
	Coalinga	Coalinga College 1, 2, 3, 9	Kenneth Savage
	Palm Desert	College of the Desert 2	Ted Sypolt
	Fullerton	Fullerton Junior College 1, 5	William P. Morgan

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
CALIFORNIA (continued)	Salinas	Hartnell College 1, 2, 9	Roy Lanina
	Imperial	Imperial Valley College 2	E. J. Mellinger
	Susanville	Lassen Junior College 7	Robert Theiler, Pres. Robley E. Aspergren, Dir.
	Woodland Hills	Los Angeles Pierce College 1, 2, 5, 9	Alvin Cleveland
	Modesto	Modesto Junior College 1,2,3,5,6,7,8,9,10,12,15	Ernest Tarone
	Walnut	Mt. San Antonio College 1,2,3,5,7,8,9,10	G. Allen Sherman
	Costa Mesa	Orange Coast College 1, 2, 5, 9	Elgin L. Hall
	Pasadena	Pasadena City College 7	Armen Sarafian, Pres.
	Porterville	Porterville College	Darwin Gubler
	Reedley	Reedley College 1, 2, 5, 9	Kenneth Houtby
	San Bernardino	San Bernardino Valley College 5	Glen E. Arthur
	San Francisco	San Francisco, City College of 5	Harry E. Nelson
	Stockton	San Joaquin Delta College 1, 2, 3, 5, 7, 9, 10	Dean McNeilly
	San Mateo	San Mateo, College of 5	Albert Wilson
	Santa Rosa	Santa Rosa Junior College 7	Randolph Newman, Pres.
	Visalia	Sequoias, College of the 1, 2, 5, 9	Bruce Jensen
	Redding	Shasta College 2	Bill Burrows
	Rocklin	Sierra College 2, 7	Martin Jack

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
CALIFORNIA (continued)	Weed	Siskiyous, College of the 2, 7	Edward Roberts
	Ventura	Ventura College 5	Don Rodgriquez
	Marysville	Yuba College 1, 2, 3, 9	George W. Vaught
COLORADO	Sterling	Northeastern Junior College	Hilbert Kahl, Chmn.
CONNECTICUT	Storrs	Ratcliffe Hicks School of Agriculture, University of Connecticut 1, 5, 8, 9	E. J. Kersting
DELAWARE	Newark	S. Hallock du Pont School of Applied Agricultural Science 2, 3, 5	Ralph P. Barwick
FLORIDA	Ft. Lauderdale	Broward County Junior College 5	Albert A. Will, Jr.
	Ocala	Central Florida Junior College 2	H. Wayne Millard
	Daytona Beach	Daytona Beach Junior College 5	Hal Massey
	Ft. Pierce	Indian River Junior College 1	Harry J. Brinkley
	Lake City	Lake City Junior College 1	Herbert Attaway
	Leesburg	Lake-Sumter Junior College	Marvin M. Jones
	Bartow	Polk Junior College 1, 2, 3, 5, 9	Owen Lee
GEORGIA	Tifton	Abraham Baldwin Agricultural College 1,2,3,5,6,7,8,9,10,11	E. S. McCain
	Americus	South Georgia Technical and Vocational School 3	Jerry R. Bowen

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
IDAHO	Boise	Boise Junior College 5	Claude Wain
	Coeur d' Alene	North Idaho Junior College 7	Clarence Haught
	Twin Falls	Southern Idaho, College of 2, 3	Wayne Rodgers
ILLINOIS	Canton	Canton Community College 3, 13	Edwin Fitzgibbon
	Chicago	Chicago City Junior College Woodrow Wilson Branch 5	Joseph Dallon, Jr.
	Danville	Danville Junior College 1, 3, 5	James F. Nickell
	Joliet	Joliet Junior College 1, 2, 6	Max H. Kuster
	Mt. Carmel	Wabash Valley College 2, 3	Robert Irvin
IOWA	Muscatine	Muscatine Community College 2, 6	Everett L. Clover Martin G. Huseman
KANSAS	McPherson and Newton	Central Kansas Agriculture-Vocational Technical School 2, 8	Richard Ramsdale
	Emporia	Flint Hills AVTS 1	Eugene Walker
	Beloit	North Central Kansas AVTS 1, 3	Dale Brooks
	Goodland	Northwest Kansas AVTS 3, 8	Maurice Little
	Coffeyville	Southeast Kansas AVTS 1, 3	W. F. Currier
	Dodge City	Southwest Kansas AVTS 1, 2	Allen Starosta
KENTUCKY	Ashland	Ashland Community College 1	
	Richland	Eastern Kentucky University 3, 5, 6, 7, 15	Dr. Wm. A. Householder

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
KENTUCKY (continued)	Elizabethtown	Elizabethtown Community College 2	
	Henderson	Henderson Community College 2	
	Hopkinsville	Hopkinsville Community College 2	
	Morehead	Morehead State University 1, 2, 5, 6	Dr. Nelson Grote, Dean School of Applied Sciences & Technology
	Prestonsburg	Prestonsburg Community College 7	
	Cumberland	Southeast Community College 7	
	Bowling Green	Western Kentucky University 1, 8	Dr. W. H. Stroube
MAINE	Orono	University of Maine 1, 2	W. C. Libby, Dean College of Life Science & Agri.
MARYLAND	College Park	University of Maryland 1, 2, 5	Prof. George Quigby
MASSACHUSETTS	Hathorne	Essex County Agricultural & Technical Institute 4, 5, 14, 15	James F. Gallant
	Walpole	Norfolk County Agricultural School 3, 5, 7	Thomas J. McGarr
	Amherst	Stockbridge School of Agriculture 1, 2, 4,5,7,12	Fred P. Jeffrey
MICHIGAN	East Lansing	Michigan State University 1, 4, 15	Harold Henneman
	Stanton	Montcalm Community College 3	Maurice D. Swift Dean, Tech-Voc. Studies
	Traverse City	Northwestern Michigan College 12	Herbert H. Tedder Dir., Voc. Education

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
MICHIGAN (continued)	Union Lake	Oakland Community College 5	James H. Dotseth, Director
	Livonia	Schoolcraft College 13	Jon P. Adanis Dean, Career Program
	Dowagiac	Southwestern Michigan College 1,2,3,5,6,9	Fred H. Bauermeister- Chairman
MINNESOTA	Austin	Austin Area Vocational School 1	Charles Painter
	Canby	Canby Area Vocational School 1, 6	Luther Severtson
	Crookston	University of Minnesota Technical Institute 1, 2, 3, 5, 6, 8, 9	Dr. B. E. Youngquist
	Jackson	Jackson Area Vocational School 1, 6	William E. Hohenhaus
	St. Cloud	St. Cloud Area Vocational School 1	Ed O'Connel
	Staples	Staples Area Vocational School 1, 2	William Guelker
	Thief River Falls	Thief River Falls Area Vocational School 1	Peter Probasco
	Winona	Winona Area Vocational School 1	Gordon Ferguson
	Willmar	Willmar Area Vocational School 1, 2, 6	Ed Hartog
MISSISSIPPI	Decatur	East Central Junior College 1, 8	B. L. Smith
	Raymond	Hinds County Junior College 1, 3, 5	Jack Treloar
	Ellisville	Jones County Junior College 1, 7	M. P. Carter
	Senatobia	Northwest Mississippi Junior College 1, 5	A. M. Briscoe
	Utica	Utica Junior College 8	J. W. Owens

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
MONTANA	Helena	Helena Area Vocational-Technical School 3	William Korizek Dir.of Voc.Educ.
	Havre	Northern Montana College 1, 2, 8	Robert Siebrasse
MISSOURI	Chillicothe	Chillicothe Area Technical School 3	Bill Gutshall
NEW HAMPSHIRE	Durham	Thompson School of Applied Science 1, 2, 3, 5, 7, 8, 9	Philip Barton, Director
NEBRASKA	Curtis	University of Nebraska School of Technical Agriculture 3, 5, 6, 10	Stanley Matske, Jr.
NEVADA	Reno	University of Nevada 3, 6, 12, 13, 16	D. W. Bohmont, Dean
NEW MEXICO	University Park	New Mexico State University 3, 5	Dr. Ramsey Groves
NEW YORK	Alfred	Agricultural and Technical College 1, 2, 3, 5, 8	William Stopper
	Canton	Agricultural and Technical College 2, 3, 4, 8, 9	Evan Dana
	Cobleskill	Agricultural and Technical College 1, 2, 3, 4, 5, 8, 9	Howard Sidney
	Delhi	Agricultural and Technical College 1, 2, 3, 4, 5, 8, 11	Wilbur Farnsworth
	Farmingdale	Agricultural and Technical College 1, 4, 5, 8, 9	Norman Foote
	Morrisville	Agricultural and Technical College 1, 2, 3, 4, 5, 12	L. Robert Crane
NORTH CAROLINA	Elizabeth City	College of the Albemarle 2	B. A. Barringer
	Hickory	Catawba Valley Technical Institute 2, 5,	R. E. Poap

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
NORTH CAROLINA (continued)	Sanford	Central Carolina Technical Institute 2, 11	E. C. Price
	Fayetteville	Fayetteville Technical Institute 2	C. D. Price
	Winston-Salem	Forsyth Technical Institute 2, 5, 9	E. B. Parry
	Jamestown	Guilford Technical Institute 1, 2	H. F. Marco
	Kinston	Lenoir County Community College 2, 5	R. S. Sutton
	Greenville	Pitt Technical Institute 2	J. E. Downing
	Asheboro	Randolph Technical Institute 2	W. A. Edwards
	Dobson	Surry Community College 2	P. E. Keicher
	Goldsboro	Wayne Technical Institute 7, 9, 10	R. L. Folsom
	Wilkesboro	Wilkes Community College 2, 4, 9	Dr. H. E. Thompson
	Wilson	Wilson County Technical Institute 3	J. H. Respass
OHIO	Cleveland	Cleveland Technical Institute 1	Vincent Feck 2201 W. 93 St. Cleveland, Ohio
	Columbus	Columbus Area Technician School 4	Russell Thackery 557 Mt. Vernon Ave. Columbus, Ohio
	Perrysburg	Penta County Vocational School and Technical College 4	James Pease
	Springfield	Springfield & Clark County Technical Education Program 2, 3	H. B. Drake

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
OKLAHOMA	Lawton	Cameron State Agricultural College 1	Glen Thomas
	Warner	Connors State Agriculture College 1	Robert A. Hodges
	Wilburton	Eastern Oklahoma A & M College 1, 4, 7	Forrest L. Hamilton
	Tishomingo	Murray State Agricultural College 1, 5	Jerry Martin
	Miami	Northeastern Oklahoma A & M College 1, 5	Harry Synar
OREGON	Pendleton	Blue Mountain Community College 8	David Raynalds
	Bend	Central Oregon Community College 7	Robert S. Johnson
	Astoria	Clatsop Community College 7, 8	Merle Peters
	Eugene	Lane Community College 3, 7	G. R. Bloomquist
	Salem	Salem-Technical-Vocational Community College 7	Paul F. Wilmeth
	Ontario	Treasure Valley Community College 1, 2, 3, 4, 8, 10	Carl Devin, Dir. Harry Hoch, Instr.
	Roseburg	Umpqua Community College 7	Robert Moldenhauer
PENNSYLVANIA	University Park	Pennsylvania State Univ. Dept. of Short Courses 3, 5, 16	Dr. Fred Snyder
	Reading	Branch 2	
	Altoona	Branch 2	
	Mount Alto	Branch 7	
	Sharon	Branch 2	
TENNESSEE	Columbia	Columbia State Community College 2, 5, 7, 10	Dr. Darrel Simmons
TEXAS	Waco	James Connally Technical Institute 5, 11	L. D. Pettey, Jr.

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
UTAH	Ephraim	Snow Junior College 1, 8	Floyd S. Holm
VERMONT	Randolph Center	Vermont Technical College 1, 3, 7	Ralph Evans
WASHINGTON	Bellingham	Bellingham Technical School 1	Raymond Smith
	Bellevue	Bellevue Public Schools 5, 12	Dr. Louis Kahn Adm. Asst.
	Moses Lake	Big Bend Community College 1, 2, 8, 9, 11	Fred Huston
	Centralia	Centralia College 1,2,7,8	Eugene Irwin
	Vancouver	Clark College 1, 2, 8	W. A. Hall
	Lakewood Center	Clover Park Vocational Technical Institute 5	Fred Minor
	Pasco	Columbia Basin Community College 1, 3, 15, 16	Albert Killingsworth
	Auburn	Green River Community College 1, 5, 7, 8, 9	Ray Needham
	Longview	Lower Columbia College 5,7	James Hichen
	Seattle	Seattle Community College 2, 5	Arlynn Anderson
	Mt. Vernon	Skagit Valley College 1, 8, 9	Richard Nowadnick
	Spokane	Spokane Community College 2, 5, 6	
	Yakima	Yakima Valley College 1, 3, 8, 9	John Griffith
	Wenatchee	Wenatchee Valley College 1, 3, 5, 7, 8, 9	Jesse Helm
WEST VIRGINIA	Glenville	Glenville State College 1	Byrl L. Law
	Keyser	Potomac State College 1, 8	Oscar Gustafson

STATE	LOCATION	NAME OF INSTITUTION AND SPECIALTY	HEAD, AGRICULTURE DEPT.
WISCONSIN	Appleton	Appleton Vocational Technical & Adult School 1, 2, 3, 9	Leonard Warner
	Kenosha	Kenosha Technical Institute 2, 3, 5	Eugene Lehrmann
	Oshkosh	Oshkosh Technical Institute 7, 10	William M. Sirek
	Wausau	North Central Technical Institute 2, 3	Lawrence Hoyt, Dir. James Zepplin
	West Bend	West Bend School of Vocational, Technical and Adult Education 1	Roger C. Christy
WYOMING	Casper	Casper College 1, 3, 8	William Henry Dale E. Stiles
	Torrington	Goshen County Community College 1, 8	Joseph A. Baird